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(54) Title: INTELLIGENT INTERFACES FOR INTEGRATING GOALS AND FINANCES IN AN INTUITIVE MANNER

(57) Abstract: Disclosed is an inventive method for assisting the user in organizing, prioritizing, and achieving goals, both financial and non-financial. A user financial database is created which represents the user's financial situation. A user goal database is also created defining at least one particular user goal. Preferably, the user goal database is suitable for storing a plurality of user goals of a various nature, such as financial goals, non-financial goals, and mixed goals. Next, the data from both the user financial database and the user goal database is integrated to determine a goal accomplishment forecast. Preferably, the goal accomplishment forecast includes a forecast related to at least one particular goal in the user goal database. An image is then associated a particular goal. The image preferably has an attribute indicative of the forecast related to the particular goal associated with the image. Finally, the image is displayed, thus providing the user an intuitive feedback related to the particular goal.

INTELLIGENT INTERFACES FOR INTEGRATING GOALS AND FINANCES IN AN INTUITIVE MANNER

BACKGROUND OF THE INVENTION

The present invention relates generally to methods, systems and interfaces for the integration of financial data with a user's goals and objectives in order to assist with management and successful completion of goals, both financial and non-financial utilizing an intuitive user-friendly user interface. In particular, the present invention uses an image associated with a user goal to provide intuitive visual feedback related to the goal.

Personal finance methods and systems are known to include software products that allow a user to enter and store financial transactions such as account debits and credits, write checks, follow investments, and deposit and transfer funds. These products also include online banking and bill paying features which allow user access to bank account information and automated payment of bills. Known personal finance software products include Quicken®, Managing Your Money™, Microsoft Money™, and Simply Money™.

Typically, as financial transactions are entered and stored, the user is prompted to categorize the type of transaction. For example, when entering account debits from a checking account, the user must provide an expense category such as mortgage, rent, education, food and so forth. Similarly, when entering account credits the user must categorize the income.

The prior art methods and systems typically provide for budgeting by processing the user's history as entered and stored in the system to arrive at a budget. By way of example, if a user has entered the same rent expense on a consistent monthly basis, the user's budget would include a budgeted monthly expense in that amount. Alternatively, the user may independently set the budget amounts in each category. Means are also provided for assessing the user's financial situation with respect to the budget and can include reports and charts which numerically or graphically show the user's actual income and expenses in comparison with the budgeted amounts.

In addition to providing a means for arriving at a budget, known personal finance software products include limited planning features that help the user plan for the future. These features include retirement and savings planners that provide the user with savings information

useful in reaching retirement and savings goals based upon the personal circumstances of the user.

Prior Art Figure 1 shows a user interface 100 of the main entry screen as provided by Microsoft Money™, a personal finance software program that is generally representative of current state of the art. The entry screen has a number of icons representative of different functions, such as an account register 102, payment calendar 104, online services 106, "planning wizards" 108 and "report and chart gallery" 110. Invoking the "report and chart gallery" icon 110 leads to the user interface 112 illustrated in Figure 2. By invoking the "My Budget" icon 114, the user is prompted to set up a budget. A portion of the "My Budget" screen 116 is shown in Figure 3. Invoking the "How I'm Doing on My Budget" icon 118 shows the bar graph 120 of Figure 4 which graphically compares the actual expense amounts to the budgeted amounts for a set time period.

Invoking the "Planning Wizard" icon 108 allows the user to access the various planning features as shown in the window 122 Figure 5. As illustrated in Figure 6, the "Savings Calculator" user interface 126 prompts the user to enter all but one field and this information is processed to arrive at the missing quantity. The system allows the user to enter a savings goal as shown at 128. The "Retirement Planner" user interface 130 is shown in Figure 7 and prompts the user to enter information relevant to his retirement income goal.

It is clear that the innovation arising in the personal finance field can represent patentable subject matter. A casual search through a United States Patent Database reveals that Microsoft Corporation, Intuit and many others have sought and obtained patent protection in the personal finance field. Several of these will now be discussed in order to further clarify the current state of the art.

One such patent is Schrader et al.'s United States (US) Patent No. 5,903,881 (the '881 patent), assigned to Intuit Inc. of Menlo Park, California, which patent was filed on June 5, 1997, and issued May 11, 1999. The '881 patent teaches a computer interface for personal online banking with integrated online statement and computerized checkbook. Further light is shed in reading the preamble of claim 1, which states that the interface is "for entering transactions included in a remotely compiled electronic statement into a financial account stored in a local computer system."

In essence, the invention claimed in the '881 patent is meant to improve upon prior e-commerce computer interfaces lacking effective integration of financial data for an institutional account. Illustrative examples include checking and savings accounts, credit cards, loans, etc.

The integration taught by the '881 patent is accomplished through simultaneously displaying a held display area showing transaction instructions not yet sent, a pending display area showing sent transactions not yet cleared, and a completed display area showing cleared transactions. This integration is further enhanced by displaying a current account balance that ignores the uncleared transactions and an impending account balance accounting for the uncleared transactions.

Chancey et al.'s US Patent No. 5,842,185 (the '185 patent), was filed as a continuation on Jul. 14, 1994, is entitled to a priority date of Feb. 18, 1993, and was issued Nov. 24, 1998. The '185 patent teaches a method and system for electronically tracking financial transactions. Claim 1 of the '185 patent states that the invention is "for entering transactions included in a remotely compiled electronic statement into a financial account stored in a local computer system."

The invention claimed in the '185 patent is directed towards automating the entry on a local computer of a transaction performed on an account located remotely. The automation taught by the '185 patent requires downloading an account statement from the remote computer to the local computer, implementing the transaction desired by the local computer, updating the account statement at the local computer, and then verifying the integrity of the updated account statement once received back at the remote computer.

Those skilled in the art will agree that consumers are generally not able to articulate their financial goals and further that existing finance software products, both personal and business related, do not adequately facilitate this process. As noted above, existing products have only limited goal setting features. Further, these features are not visibly linked to the user's budget and the budget is not directly related to achieving the user's overall financial goals. Existing products also suffer from usability concerns as consumers are less likely to use a personal finance product that displays financial information in an "unfriendly" manner, such as in spreadsheet format.

In summary, existing personal finance software products and systems do not provide for the matching or integration of the user's personal financial situation with the user's overall financial goals. Additionally, existing products do not employ a user friendly interface that enables the user to easily access the information displayed. Accordingly, it is desirable to provide a personal finance software method and system that integrates the user's financial situation with the user's financial goals and that does so in a user friendly manner.

SUMMARY OF THE INVENTION

The present invention addresses the aforementioned problems by providing a computer implemented method for assisting the user in organizing, prioritizing, and achieving goals, both financial and non-financial. In one embodiment, a user financial database is created which represents the user's financial situation. A user goal database is also created defining at least one particular user goal. Preferably, the user goal database is suitable for storing a plurality of user goals of a various nature, such as financial goals, non-financial goals, and mixed goals. Next, the data from both the user financial database and the user goal database is integrated to determine a goal accomplishment forecast. Preferably, the goal accomplishment forecast includes a forecast related to at least one particular goal in the user goal database. An image is then associated for the particular goal. The image preferably has an attribute indicative of the forecast related to the particular goal associated with the image. Finally, the image is displayed, thus providing the user with an intuitive feedback related to the particular goal.

In another embodiment, a user goal database is developed defining at least one particular user goal. Preferably, the user goal database is suitable for storing a plurality of user goals of a various nature, such as financial goals, non-financial goals, and mixed goals. A user financial database is also developed which represents the user's financial situation. Next, a goal accomplishment plan is developed for the user. The goal accomplishment plan preferably includes a given transaction that tends to further the user in accomplishing at least one particular goal when the transaction is completed. A set of transaction options are then developed which begin executing acts intended to complete the above transaction, when selected and preformed. Finally, a preferred option for initiating the above transaction is selected.

In a further embodiment, a user financial database representing the financial situation of the user is created. Next, a user goal database is created defining at least one particular user goal. Preferably, the user goal database is suitable for storing a plurality of user goals of a various nature, such as financial goals, non-financial goals, and mixed goals. The data from both the user financial database and the user goal database is then integrated to determine a goal accomplishment forecast. Next, the goal accomplishment forecast is displayed to the user. Each goal displayed with the goal accomplishment forecast preferably includes an attribute indicative of whether the goal can be accomplished as desired by the user. Then a plurality of strategies that tend to improve the goal accomplishment forecast are suggested. Next, a strategy selected

from the suggesting strategies is received, and the goal accomplishment forecast is updated in accordance with the selected strategy. Finally, the updated goal accomplishment forecast is displayed to the user.

In yet another embodiment, a computer system suitable for assisting a user in performing financial analysis, goal forecasting, and goal strategizing is disclosed. The computer system includes a user financial database, and a user goal database. Preferably, the user financial database is represents a financial situation of the user, and the user goal database represents at least one particular goal of the user. In addition the user goal database is preferably suitable for storing a plurality of user goals of a various nature, such as financial goals, non-financial goals, and mixed goals. Also included in the computer system is an executable forecasting process for integrating data from both the user financial database and the user goal database to determine a goal accomplishment forecast for the user. Finally, a computer interface is included which is operable to guide the user through the creation of the user financial database, and the user goal database, as well as the generation of the goal accomplishment forecast. Preferably, the computer interface includes an intelligent icon that is responsive, when selected, to display at least one image associated with an action which the user must complete. In addition, the computer interface includes a goal reference image associated with at least one particular goal of the user. The goal reference image provides intuitive feedback indicative of the particular goal. Furthermore, the goal reference image preferably includes an attribute indicative of the forecast related to the particular goal.

Advantageously, the present invention provides a matching or integration of the user's personal financial situation with the user's overall financial goals utilizing a user-friendly interface. Additionally, the user interface of the present invention enables the user to easily access complex financial information in a user-friendly manner.

BRIEF DESCRIPTION OF THE DRAWINGS

PRIOR ART FIGURES 1-7 illustrate several different display screens from Microsoft Money, a personal finance software;

FIGURE 8 represents one possible paradigm suitable to provide a context for describing certain aspects of the present invention;

FIGURE 9 shows a computer interface display with a "magic lamp" intelligent icon in accordance with one embodiment of the present invention;

FIGURE 10 shows the computer interface display of Figure 9 updated to reflect user selection of the magic lamp intelligent icon;

FIGURES 11-14 show several computer interface displays suitable for guiding a user through the entry of financial data in accordance with one embodiment of the present invention;

FIGURE 15 show the computer interface display of Figure 9 updated to reflect selection of the magic lamp intelligent icon after completion of financial data entry;

FIGURE 16 shows a computer interface display for guiding a user through the entry of goals and objectives in accordance with one embodiment of the present invention;

FIGURE 17 shows a computer interface display presenting a goal accomplishment forecast based upon the integration of user financial data with user goals and objectives in accordance with another embodiment of the present invention;

FIGURES 18-33 show a variety of computer interface displays providing the user strategies for improving the goal accomplishment forecast and guiding the user through the selection of such strategies;

FIGURE 34 illustrates a network of computer systems in accordance with one embodiment of the present invention; and

FIGURE 35 illustrates a computer system in accordance with one embodiment of the present invention.

DETAILED DESCRIPTION OF THE INVENTION

The present invention teaches a variety of methods, systems and interfaces for the integration of financial data with goals and objectives in order to assist with management and successful completion of goals, both financial and non-financial.

A user paradigm 150 suitable for understanding certain premises and features of the present invention will now be described with reference to Figure 8. The user paradigm 150 includes financial data 152, goals and objectives 154, finance software 156, a remote server 158, and strategies 160. The finance software 156 provides a user an improved interface for entering and tracking financial data 152, entering and organizing goals 154. As will be described below, the financial software 156 utilizes intelligent icons for guiding the user through data entry, a figureless data entry mechanism that improves upon prior art cell and keystroke entry, and a variety of other features.

Once the user has entered certain basic data, the Dreamdriver software 156 integrates and matches the figures 152 with the personal goals 154, assists the user in prioritizing the goals 154, provides goal accomplishment forecasting, suggests strategies for improving the goal accomplishment forecast, provides psychological coaching based upon the user's current data and past history, and still further begins implementing actions which when completed tend to further the user's goal accomplishments.

In addition to data integration and processing performed locally on the user's computer, the present invention contemplates that at least upon occasion the user may enable the Dreamdriver software 156 to communicate with the remote Dreamdriver server 158. One aspect of the present invention teaches so-called "autofed" intelligence. Autofed intelligence involves a learning process whereby the remote Dreamdriver server 158 tracks strategies and actions that others personal users have developed in seeking after their own personal goals. These ideas and the information gleaned from their implementation can be made available to other users as they try to improve and customize their goal accomplishment forecast. Further, the remote Dreamdriver server 158 can initiate specific actions involved in the completion of the user's goals. For example, a user may have entered a Carribean vacation as a specific goal. The Dreamdriver server 158 can search (over the Internet, e.g.) for pricing, availability, etc., and return this information to the user who in turn can act upon it.

A first aspect of the present invention teaches a computer implemented method for assisting a user in organizing, prioritizing and achieving goals both financial and non-financial. Initially the software 156 must create a user financial database and a user goal database. These databases are then integrated in order to determine a goal accomplishment forecast provided to the user. In preferred embodiments, the goal accomplishment forecast is displayed to the user together with a variety of strategies which when implemented by the user tend to improve on the original goal accomplishment forecast. The user may then select one or more strategies or create their own strategy and in response the finance software 156 can display an updated goal accomplishment forecast.

In general, the financial goal database represents the user's financial situation in sufficient detail to accomplish the desired goal forecasting and goal completion strategizing. As will be appreciated, certain predefined aspects of the financial data are typically required to accomplish the processing, such as income, expenses, assets, etc. In preferred embodiments of the present invention, entry of such financial data will involve providing the user an icon driven computer interface assisting the user with entry of financial data defining the user financial situation.

In one embodiment, the act of providing the user an icon driven computer interface includes displaying an intelligent icon which indicates to the user that additional action is required of the user before further processing can be accomplished. The intelligent icon interface thus guides the user through the variety of data, both financial and goal related, which must be accomplished. As will be appreciated, the intelligent icon can be selected by the user in a variety ways including rolling a pointer of the icon, as well as "clicking" or "double-clicking" on the intelligent icon.

To further simplify user interaction, preferred embodiments of the present invention involve associating meaningful images with certain aspect of the financial data, the user goals and the goal forecasting. Attributes such as visual and aural attributes can be associated with these images, thus providing intuitive feedback to the user.

Of course, the financial data and the goals data need not be entered directly by the user through the finance software of the present invention. Rather, it is contemplated that financial data entered into conventional prior art finance systems could be ported into the databases of the present invention. Additionally, data may be retrieved from remote sources such as on-line

banking services etc. In fact, it is contemplated that certain data will be imported from other programs as users upgrade to the systems of the present invention, other data will be retrieved from remote sources, and other data will be entered by the user directly. Hence the features of the intelligent icon described above become particularly useful for guiding the user in taking full advantage of the present invention.

In addition to creating the user financial database, a user goal database must be created. In preferred embodiments, the user goal database is suitable for storing data representing a plurality of user goals, but at least one particular user goal must be defined by the user goal database. Note that goals and objectives are defined broadly to include financial, non-financial, and mixed goals, as a primary purpose of the present invention is to extend traditional financial software systems to include goals generally considered non-financial goals in order to better integrate all aspects of the user's life and/or business.

Once the financial and goal databases have been created, the present invention teaches integrating data from both the user financial database and the user goal database to determine a goal accomplishment forecast. The goal accomplishment forecast provides the user a concrete integration of financial data and goals in the form of a prediction of certain aspects of the goals. In particular, the goal accomplishment forecast should indicate to the user when certain goals may be accomplished, and whether such completion is within the desired bounds meaning timing and effect upon other goals.

In preferred embodiments of the present invention, the goal accomplishment forecast will be displayed with images associated with the analyzed goals. Typically these images will include a visual and perhaps an aural attribute which indicates the predicted success. For example, a black and white image may be displayed when the goal is not timely completed while a color image may be displayed when the goal is timely completed.

Together with display of the goal accomplishment forecast, the present invention teaches the provision of one or more strategies which when adopted by the user tend to improve upon the original goal accomplishment forecast. These strategies may be calculated based upon the user data, developed from predefined strategy options stored either locally on a remote server, or may be developed by comparing actions taken by other users stored for reference in an evolving persistent database. By analyzing the user related data, the finance software of the present invention may suggest actions such as decreasing spending, increasing earning potential, sale of

an asset, tax reduction strategies, increase or decrease savings, etc. Many of these strategies may be stored locally as predefined strategies and others are calculated from the integration of the database. Additionally, the user may create and enter their own strategy. Other strategies are derived from strategies that previous users have developed for dealing with similar circumstances.

In order to facilitate the continual evolution of strategies for users, the present invention contemplates a distributed system for assisting a plurality of users in organizing, prioritizing and achieving goals both financial and non-financial. To accomplish this, a strategy database available to a plurality of users is maintained either on a single server computer or distributed across a plurality of computers available to the users. The strategy database includes strategy data for integrating with goals and financial data of a particular user in order to develop strategies which tend to improve the goal accomplishment forecast for the particular user. Each time a new strategy is proposed by a user, a synchronization process updates the strategy database thereby making the new strategy available to others of the plurality of users. Such synchronization may occur real-time or in a delayed manner.

With reference to Figures 9-33, an application implementing many of the above-described features in the context of a personal finance software product will now be described. Figure 9 illustrates a user entrance interface 200 of a personal finance software product in accordance with the present invention. In this particular embodiment, the software executes on a client or user computer and is coupled over a communications network to a distributed computer system such as the Internet.

The user entrance interface 200 includes a plurality of icons 202 and pull down menus 204 of the type well known in the art. As will be described in more detail below with reference to Figures 10 and 13, preferred embodiments of the present invention include an intelligent icon 206 common to many of the user interfaces of this particular embodiment. In this particular embodiment, the intelligent icon 206 is embodied as a "magic lamp" icon 206. As will be explained in further detail below, invoking the magic lamp icon 206 provides the user with icons indicative of the next steps or actions the user can perform.

For example, as shown in Figure 10, the initial or first time the user invokes the magic lamp icon 206, a calculator icon 208 is displayed within the entrance interface 200, prompting the user to enter personal finance information. Invoking calculator icon 208 in turn displays user

interface 210 having and Expenses button 212 and an Incomes/Assets button 214. These buttons are utilized by the user of the program to enter his financial situation. For example, as shown in Figure 12, the user's expenses are entered in user interface 216 while the user's income and assets are entered in user interface 218. The entered information defining the user's financial information comprises a second set of data.

After the user has entered his financial information, invoking the magic lamp icon 206 displays icon 220 as shown in Figure 15. Invoking icon 220 displays user interface 222 in which the user enters his financial objectives or goals (Figure 16). As shown, the user can select goals to be achieved in a specified number of years. The entered information defining the user's financial goals comprises a first set of data.

In a first aspect of the invention, the processor displays the time within which the user's goals can be reached given the user's current financial situation in user interface 224 (Figure 17). By way of example, in the illustrated user interface 224, the user's first year objectives will be reached in 2.5 years, the third year objectives will be reached in 2.9 years and the fifth year objectives will be reached in 6.8 years. Thusly, some of the user's objective will not be met within his desired timeframe.

The system of the present invention provides a means by which the user can determine what effect an action taken to change his financial situation has upon the attainment of his goals. By invoking the "Analysis" icon 226, user interface 228 is displayed. As illustrated in Figure 18, a plurality of actions 230 are displayed. By way of example, if the user selects increasing savings by 20%, the time within which the user can achieve his goals is recomputed by the processor and displayed in user interface 232 as shown in Figure 19. As illustrated, the user can now achieve his first year objectives in 1.9 years, his third year objectives in 2.8 years and his fifth year objectives in 5.9 years.

In another aspect of the present invention, invoking the "Vision" icon 232 illustrated in Figure 18, displays a plurality of icons 234 in display area 233. As shown, the icons 234 represent the user's goals. The icons 234 further include at least a first attribute representative of the user's ability to achieve the represented goal. In the preferred embodiment, a black and white attribute represents the condition where the goal is not achievable in the short term, a color attribute represents the condition where the goal is achievable in the short term and an attribute

between black and white and color represents the condition where the goal is becoming achievable.

By invoking the "Adjust" button 238 in user interface 236, the user can make additional changes and note the effect these changes have upon his ability to meet his goals. As shown in Figure 20, user interface 240 provides the user with a plurality of actions 242 which the user may select. By way of example, Figure 21 illustrates the effect upon the attainment of the user's goals of decreasing the tax rate, increasing the performance rate and increasing motivations and actions in user interface 244.

With reference to Figure 22, user interface 250 is shown including three scenario buttons 252, 254 and 256. By pointing at button 252 with the input device, icons 258 are displayed in display area 260. As shown, icons 258 each have one of the three attributes representative of the user's ability to achieve his goals given the circumstances of scenario one in which his first year goals were achievable in 2.5 years, his third year goals were achievable in 2.9 years and his fifth year goals were achievable in 6.8 years. In similar fashion, icons 258 are displayed for scenario two and three (Figs. 23 and 24). In this manner, the user can graphically determine the effect upon his ability to attain his goals of various possible actions.

In yet another aspect of the present invention, user interface 260 enables the user to prioritize his goals (Figure 25). By way of example, selecting button 262 displays user interface 270 as illustrated in Figure 26. A graphical means 272 is displayed which corresponds to time within which the user will be able to achieve the selected goals. This graphical means 272 can be compared to a graphical means 264 in user interface 260. The user can thereby easily see the effect of adding and prioritizing goals upon the attainment of these goals.

In another aspect of the invention, a means is provided to facilitate the user's selection of actions he can take to achieve his goals in a shorter time. With reference to Figure 27, a user interface 280 is illustrated including an "Easy Actions" button 282. Upon placing the pointing device over button, the system graphically displays the effect of taking the represented actions by means of displaying shortened timelines 284 in display area 286. Invoking button 282 displays a plurality of actions 292 as displayed in user interface 290 and illustrated in Figure 28.

An "Advanced Actions" button 294 is shown displayed in user interface 290. By invoking button 294, a plurality of actions 302 are displayed in user interface 300 as shown in

Figure 29. By way of example, selecting "Increase Income" displays user interface 310 as illustrated in Figure 30. A plurality of actions 314 are displayed in association with action 312.

In another aspect of the invention, a means by which the user is "coached" to achieve his goals is provided. The system of the present invention includes a plurality of means represented by buttons 315, 316 and 317 which prompt the user to enter his reasons for not taking certain actions, enter his motivating reasons for taking the actions, and enter actions he will take as a result of entering the aforementioned reasons for not taking action and motivating reasons.

Invoking the "Not Done" button 315 in user interface 310 displays user interface 320 (Figure 31). By way of example the user is prompted to enter his reasons for not taking the action of "renegotiate salary". Invoking the "Motivator" button 316 in user interface 310 displays user interface 330 (Figure 32). The user is prompted to enter his motivating reasons. Invoking the "Push" button 317 in user interface 310 displays user interface 340 (Figure 33). The user is prompted to enter actions he will take as a result of entering his reasons in user interfaces 320 and 330.

In another aspect of the invention, the system of the present invention is coupled over a communications network to a distributed computer system such as the Internet. By way of example, a representative network arrangement 300 is illustrated in Figure 34. The network arrangement 300 includes a first computer 302 which is coupled to a transmission line 304. The network 300 further includes a server, router or the like 306 in addition to other computers 308, 310, and 312 such that data and instructions can be passed among the networked computers. The design, construction and implementation of computer networks will be familiar to those of skill in the art.

A representative computer 330 suitable for use as computers 302, 308, 310, and/or 312 of Figure 34 is illustrated schematically in Figure 35. Computer 330 includes a central processing unit (CPU) 332 which is coupled bidirectionally with random access memory (RAM) 334 and unidirectionally with read only memory (ROM) 336. Typically, RAM 334 is used as a "scratch pad" memory and includes programming instructions and data for processes currently operating on CPU 332. ROM 336 typically includes basic operating instructions, data and objects used by the computer to perform its functions. In addition, a mass storage device 338, such as a hard disk, CD ROM, magneto-optical (floptical) drive, tape drive or the like, is coupled bidirectionally with CPU 332. Mass storage device 338 generally includes additional programming instructions, data and objects that typically are not in active use by the CPU, although the address space may be accessed by the CPU, *e.g.*, for virtual memory or the like.

Each of the above described computers optionally includes an input/output source 340 that typically includes input media such as a keyboard, pointer devices (*e.g.*, a mouse or stylus) and/or network connections. Additional mass storage devices (not shown) may also be connected to CPU 332 through a network connection. It will be appreciated by those skilled in the art that the above described hardware and software elements, as well as the networking devices, are of standard design and construction, and will be well familiar to those skilled in the art.

While the user likely will perform initial set-up and primary data entry while sitting at a desktop type computer, it will be appreciated that remote entry of the financial and goal based data has a variety of benefits. For example, a vast number of financial transactions and goal affecting decisions occur while the user is away from their primary computer system. Accordingly, the present invention also teaches a computer system suitable for assisting a user in performing financial analysis, goal forecasting and goal strategizing from remote locations. In preferred a embodiment, this computer system will have a server computer which is the user's primary computer for performing financial analysis, goal forecasting, and goal strategizing, and a remote computer enabling the user to perform at least a limited amount of financial analysis, goal forecasting and goal strategizing.

The user's primary computer will be similar to that described in that it will include a user financial database representative of a financial situation of the user, a user goal database suitable for storing a plurality of user goals of a various nature, and an executable forecasting process for integrating data from both the user financial database and the user goal database to determine a goal accomplishment forecast for the user. In addition, however, the user's primary computer will have an executable server update process that communicates, either in real time, delayed or as forced by the user, with the remote computer to receive data intended to alter at least one of the user financial database, the user goal database, and the goal accomplishment forecast

Residing on the user's remote computer will be a lightweight database suitable for storing data related to the user financial database, the user goal database and the goal accomplishment forecast, an interface process operable to assist the user in entry of data into the lightweight database and a lightweight update process operable to communicate with the server update process in order to synchronize the lightweight database and the user databases on the user's primary computer. The user's remote computer can take a variety of suitable forms such as a

cellular telephone, a personal digital assistant (PDA) (e.g., 3Com's PalmPilot device, Apple's Newton device, etc.) or a WebTV device.

Although only a few embodiments of the present invention have been described in detail, it should be understood that the present invention may be embodied in many other specific forms without departing from the spirit or scope of the invention. Therefore, the present examples are to be considered as illustrative and not restrictive, and the invention is not to be limited to the details given herein, but may be modified within the scope of the appended claims.

CLAIMS

We Claim

1. A computer implemented method for assisting a user in organizing, prioritizing and achieving goals both financial and non-financial, the computer implemented method comprising the acts of:

creating a user financial database representative of a financial situation of said user;

creating a user goal database defining at least one particular user goal, said user goal database suitable for storing a plurality of user goals of a various nature, possible types of goals including financial, non-financial, and mixed goals;

integrating said user financial database and said user goal database to determine a goal accomplishment forecast, said goal accomplishment forecast including a forecast related to said at least one particular goal;

associating an image with said at least one particular user goal, said image providing intuitive feedback indicative of said at least one particular goal, said image having an attribute indicative of said forecast related to said at least one particular goal; and

displaying said image associated with said at least one particular user goal thereby providing said user intuitive feedback related to said at least one particular goal.

2. A computer implemented method as recited in claim 1 wherein said attribute includes a visual attribute.

3. A computer implemented method as recited in claim 2 wherein said attribute includes an aural attribute.

4. A computer implemented method as recited in claim 2 wherein said image associated with said at least one particular goal is displayed in monochrome when said forecast related to said at least one particular user goal is negative and is displayed in color when said forecast related to said at least one particular goal is positive.

5. A computer implemented method as recited in claim 1 wherein said attribute includes an aural attribute.

6. A computer implemented method for assisting a personal user in achieving personal goals both financial and non-financial, the computer implemented method comprising the acts of:

developing a user goal database defining a particular user goal, said user goal database suitable for storing a plurality of user goals of a various nature, possible types of goals including financial, non-financial, and mixed goals;

developing a user financial database representative of a financial situation of said user;

developing a goal accomplishment plan for said user, said goal accomplishment plan including a given transaction which when completed tends to further said user in accomplishing said particular user goal;

developing a set of transaction options, each of which when selected and performed will begin executing acts intended to complete said given transaction; and

selecting a preferred option for initiating said given transaction.

7. A computer implemented method for assisting a user in organizing, prioritizing and achieving goals both financial and non-financial, the computer implemented method comprising the acts of:

creating a user financial database representative of a financial situation of said user;

creating a user goal database defining at least one particular user goal, said user goal database suitable for storing a plurality of user goals of a various nature, possible types of goals including financial, non-financial, and mixed goals;

integrating the user financial database and the user goal database to determine a goal accomplishment forecast;

displaying said goal accomplishment forecast to said user, each goal displayed within said goal accomplishment forecast including an attribute indicative of whether said goal can be accomplished as desired by the user;

suggesting a plurality of strategies that tend to improve said goal accomplishment forecast;

receiving a selected strategy from said plurality of strategies;

updating said goal accomplishment plan in accordance with said selected strategy; and

displaying said updated goal accomplishment forecast to said user.

8. A computer system suitable for assisting a user in performing financial analysis, goal forecasting and goal strategizing, the computer system comprising:

a user financial database representative of a financial situation of said user;

a user goal database representative of at least one particular user goal, said user goal database suitable for storing a plurality of user goals of a various nature, possible types of goals including financial, non-financial, and mixed goals; and

an executable forecasting process for integrating data from both said user financial database and said user goal database to determine a goal accomplishment forecast for said user;

a computer interface operable to guide a user through the creation of said user financial database and said user goal database as well as the generation of said goal accomplishment forecast, the computer interface including an intelligent icon which when selected by said user is responsive to display at least one image associated with an action which said user must complete, the computer interface further including a goal reference image associated with said at least one particular user goal, said goal reference image providing intuitive feedback indicative of said at least one particular goal, said goal reference image having an attribute indicative of said forecast related to said at least one particular goal.

9. A computer system as recited in claim 8 wherein the act of selecting said intelligent icon includes rolling a pointer over said intelligent icon.

10. A computer system as recited in claim 8 wherein the act of selecting said intelligent icon includes clicking on said intelligent icon with a pointing device.

11. A computer system as recited in claim 8 wherein the act of selecting said intelligent icon includes double-clicking on said intelligent icon with a pointing device.

12. A computer system as recited in claim 8 wherein said at least one image includes an attribute indicative of a status of said action, said status possibilities including a) not yet initiated, b) partially completed, and c) complete.

13. A computer system as recited in claim 12, wherein said action is a next action to be completed by said user has a status of not yet initiated, said computer interface responsive to a selection of said at least one image to initiate said next action.

14. A computer system as recited in claim 12 wherein said action is an action said user has completed, and said at least one image is displayed in black and white to indicate such status.

15. A computer interface as recited in claim 12 wherein said attribute includes a visual attribute.

16. A computer interface as recited in claim 15 wherein said attribute includes an aural attribute.

17. A computer system as recited in claim 12 wherein said attribute includes an aural attribute.

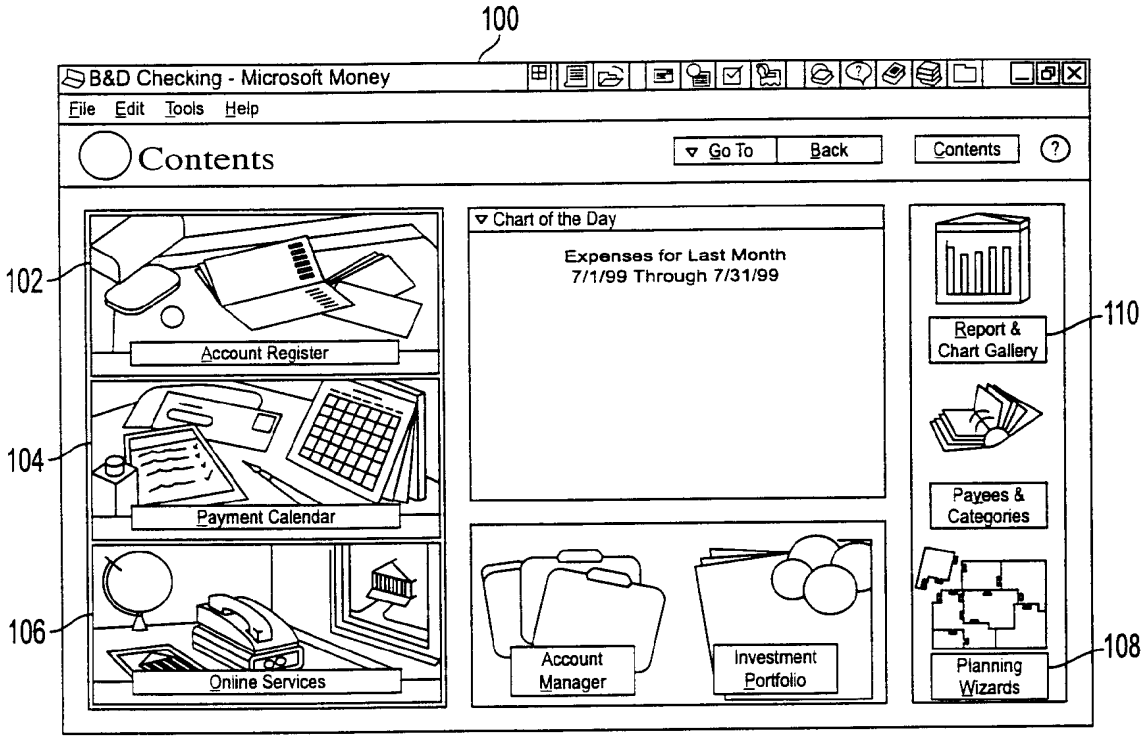

100
B&D Checking - Microsoft Money
File Edit Tools Help
Contents
Go To
Back
Contents
Chart of the Day
Expenses for Last Month
7/1/99 Through 7/31/99
Account Register
Payment Calendar
Online Services
Account Manager
Investment Portfolio
Report & Chart Gallery
Payees & Categories
Planning Wizards
102
104
106
108
110

FIG. 1

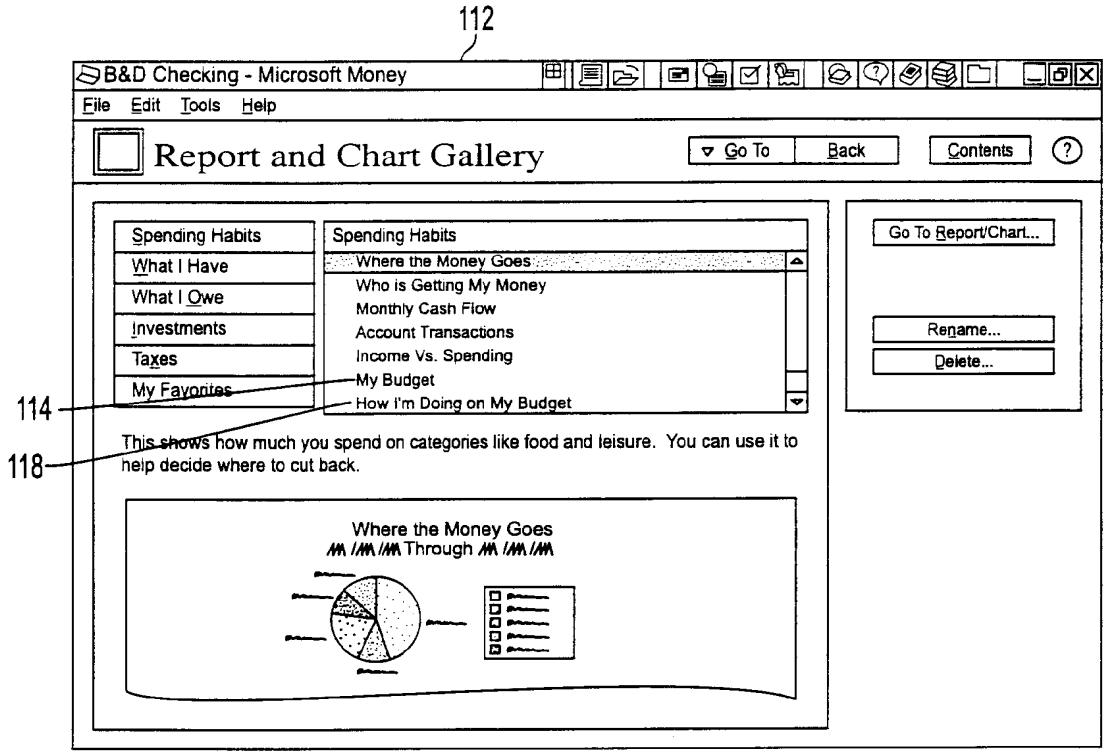

112
B&D Checking - Microsoft Money
File Edit Tools Help
Report and Chart Gallery
Go To
Back
Contents
Spending Habits
What I Have
What I Owe
Investments
Taxes
My Favorites
Spending Habits
Where the Money Goes
Who is Getting My Money
Monthly Cash Flow
Account Transactions
Income Vs. Spending
My Budget
How I'm Doing on My Budget
Go To Report/Chart...
Rename...
Delete...
114
118
This shows how much you spend on categories like food and leisure. You can use it to help decide where to cut back.
Where the Money Goes
Through

FIG. 2

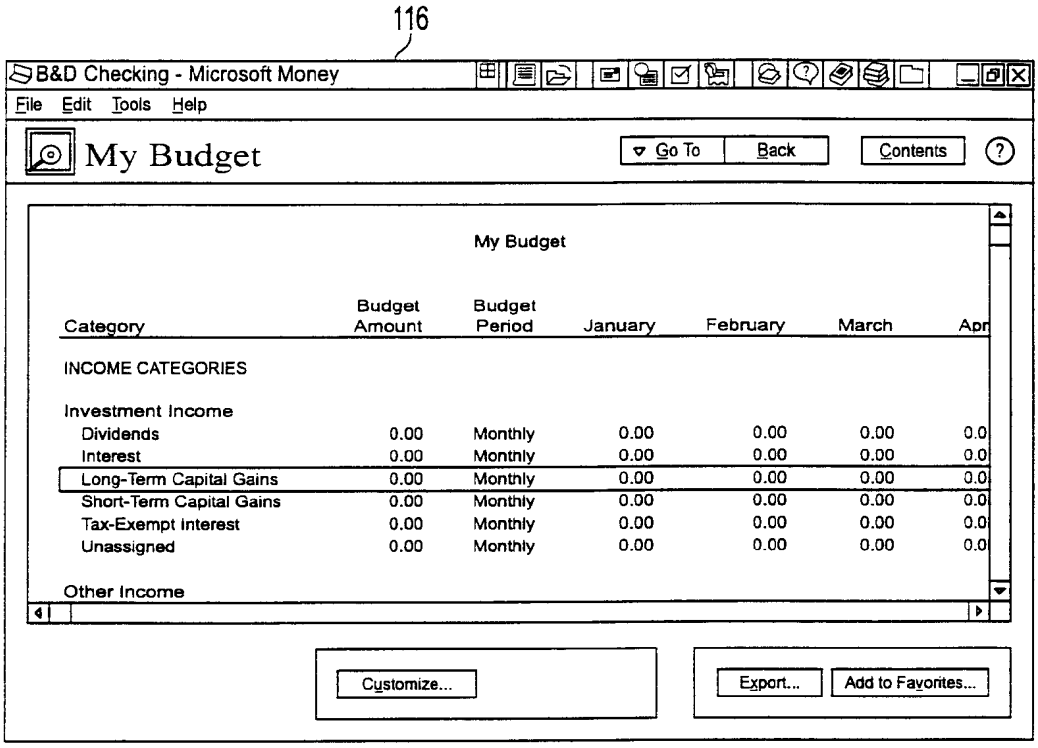

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B&D Checking - Microsoft Money
File Edit Tools Help
My Budget
Go To
Back
Contents
My Budget
Category
Budget Amount
Budget Period
January
February
March
Apr
INCOME CATEGORIES
Investment Income
Dividends 0.00 Monthly 0.00 0.00 0.00 0.0
Interest 0.00 Monthly 0.00 0.00 0.00 0.0
Long-Term Capital Gains 0.00 Monthly 0.00 0.00 0.00 0.0
Short-Term Capital Gains 0.00 Monthly 0.00 0.00 0.00 0.0
Tax-Exempt Interest 0.00 Monthly 0.00 0.00 0.00 0.0
Unassigned 0.00 Monthly 0.00 0.00 0.00 0.0
Other Income
Customize...
Export...
Add to Favorites...

FIG. 3

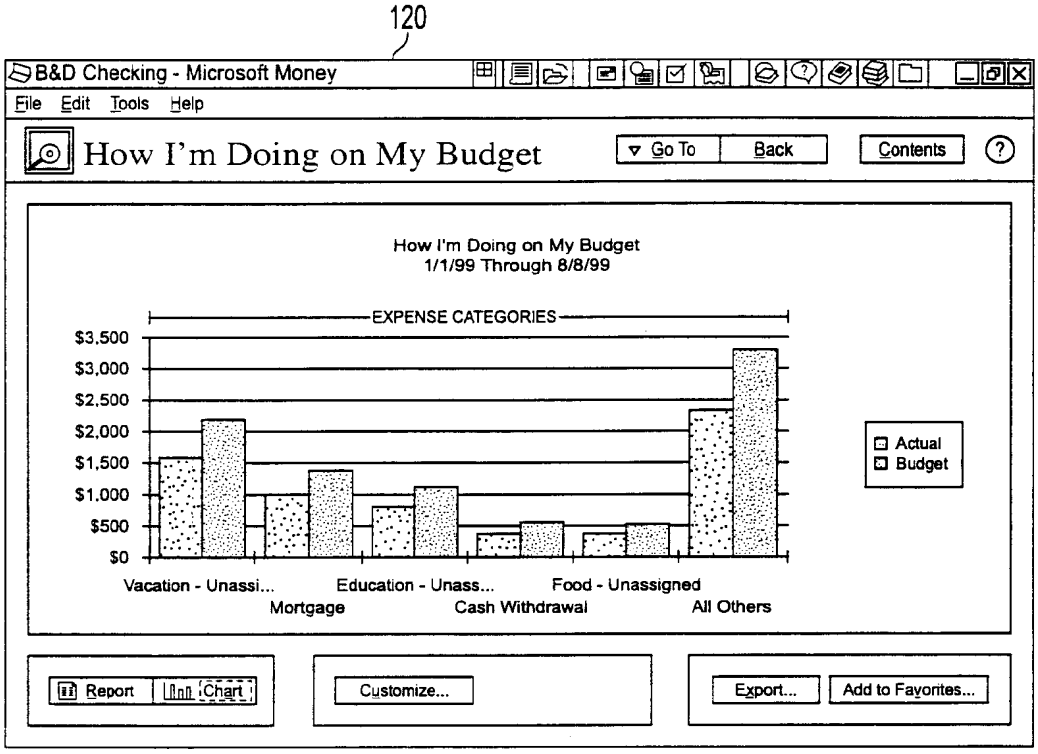

120
B&D Checking - Microsoft Money
File Edit Tools Help
How I'm Doing on My Budget
Go To
Back
Contents
How I'm Doing on My Budget
1/1/99 Through 8/8/99
EXPENSE CATEGORIES
$3,500
$3,000
$2,500
$2,000
$1,500
$1,000
$500
$0
Vacation - Unassi...
Mortgage
Education - Unass...
Cash Withdrawal
Food - Unassigned
All Others
Actual
Budget
Report
Chart
Customize...
Export...
Add to Favorites...

FIG. 4

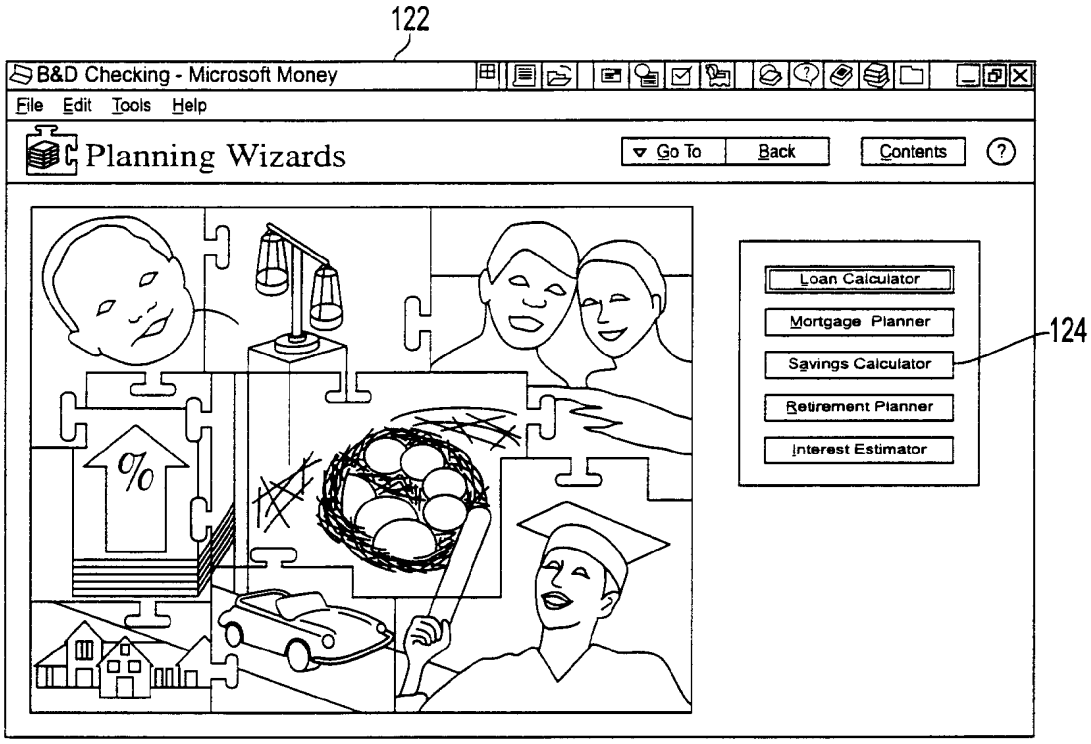

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B&D Checking - Microsoft Money
File Edit Tools Help
Planning Wizards
Go To
Back
Contents
Loan Calculator
Mortgage Planner
Savings Calculator
Retirement Planner
Interest Estimator
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FIG. 5

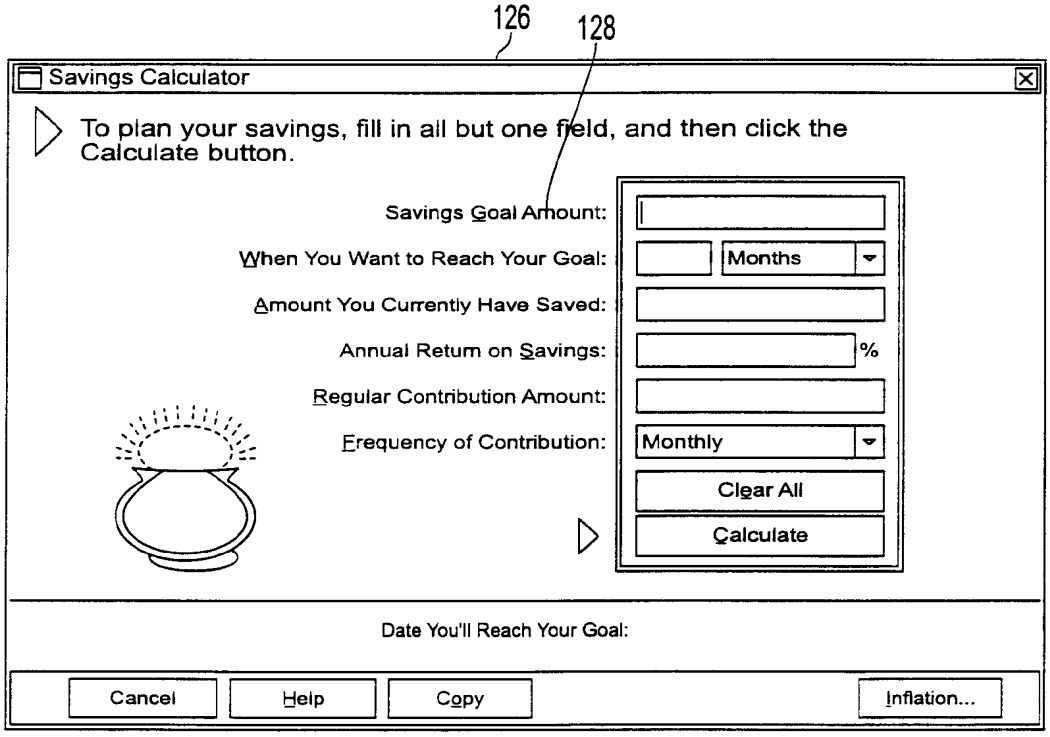

126
128
Savings Calculator
To plan your savings, fill in all but one field, and then click the Calculate button.
Savings Goal Amount:
When You Want to Reach Your Goal:
Months
Amount You Currently Have Saved:
Annual Return on Savings:
%
Regular Contribution Amount:
Frequency of Contribution:
Monthly
Clear All
Calculate
Date You'll Reach Your Goal:
Cancel
Help
Copy
Inflation...

FIG. 6

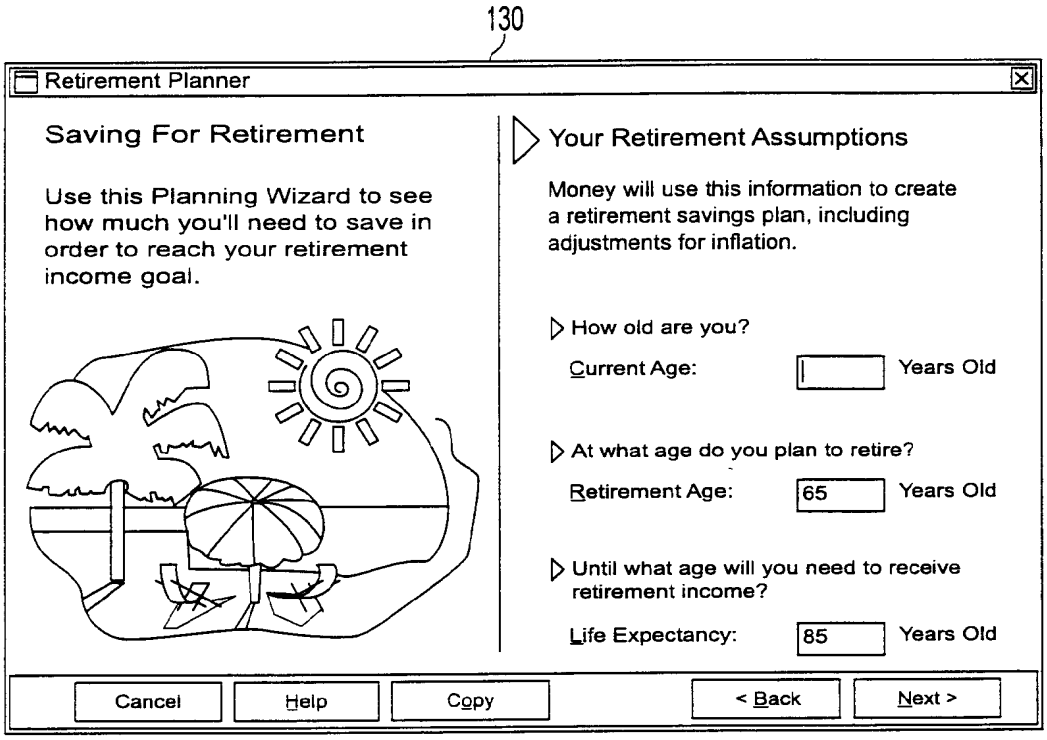

130
Retirement Planner
Saving For Retirement
Use this Planning Wizard to see how much you'll need to save in order to reach your retirement income goal.
Your Retirement Assumptions
Money will use this information to create a retirement savings plan, including adjustments for inflation.
How old are you?
Current Age:
Years Old
At what age do you plan to retire?
Retirement Age:
65
Years Old
Until what age will you need to receive retirement income?
Life Expectancy:
85
Years Old
Cancel
Help
Copy
< Back
Next >

FIG. 7

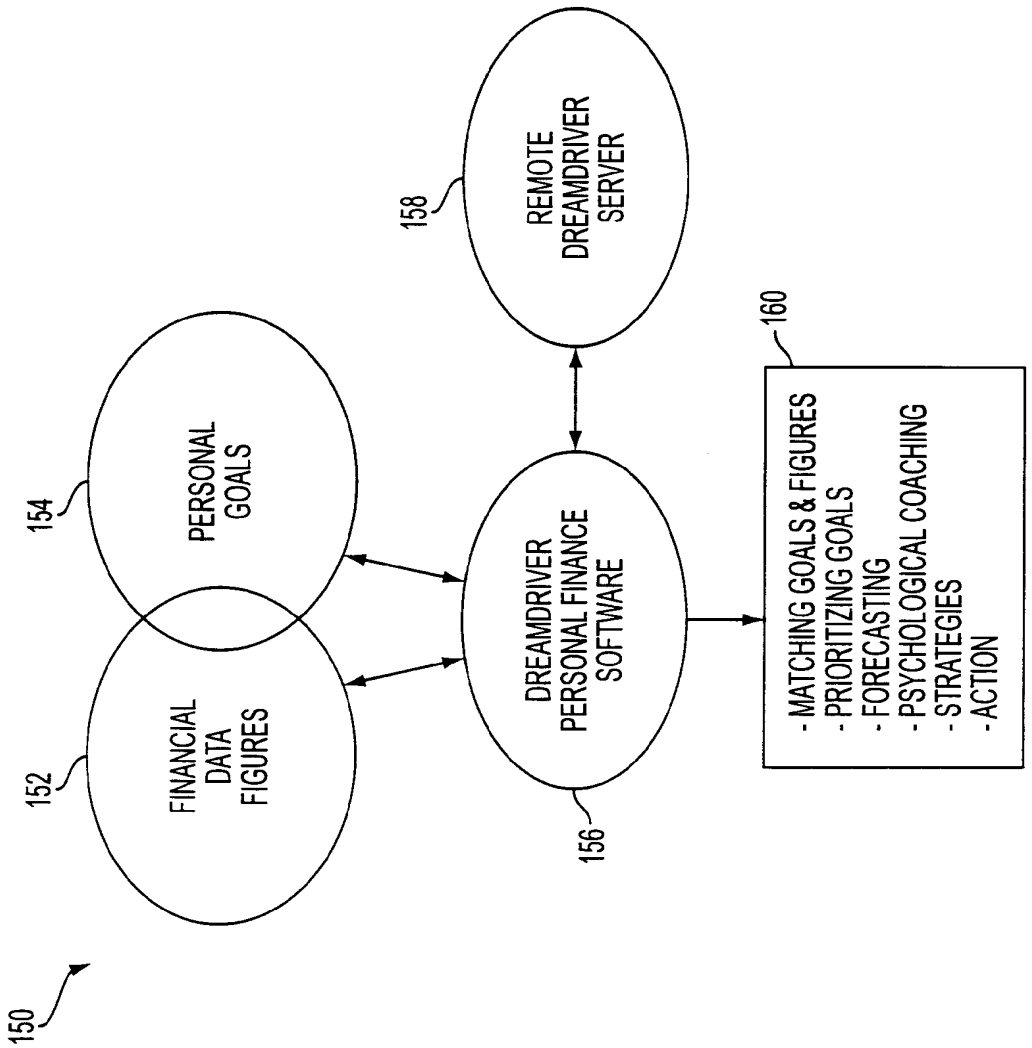

150
152
FINANCIAL DATA FIGURES
154
PERSONAL GOALS
156
DREAMDRIVER PERSONAL FINANCE SOFTWARE
158
REMOTE DREAMDRIVER SERVER
160
- MATCHING GOALS & FIGURES
- PRIORITIZING GOALS
- FORECASTING
- PSYCHOLOGICAL COACHING
- STRATEGIES
-ACTION

FIG. 8

Fig. 9

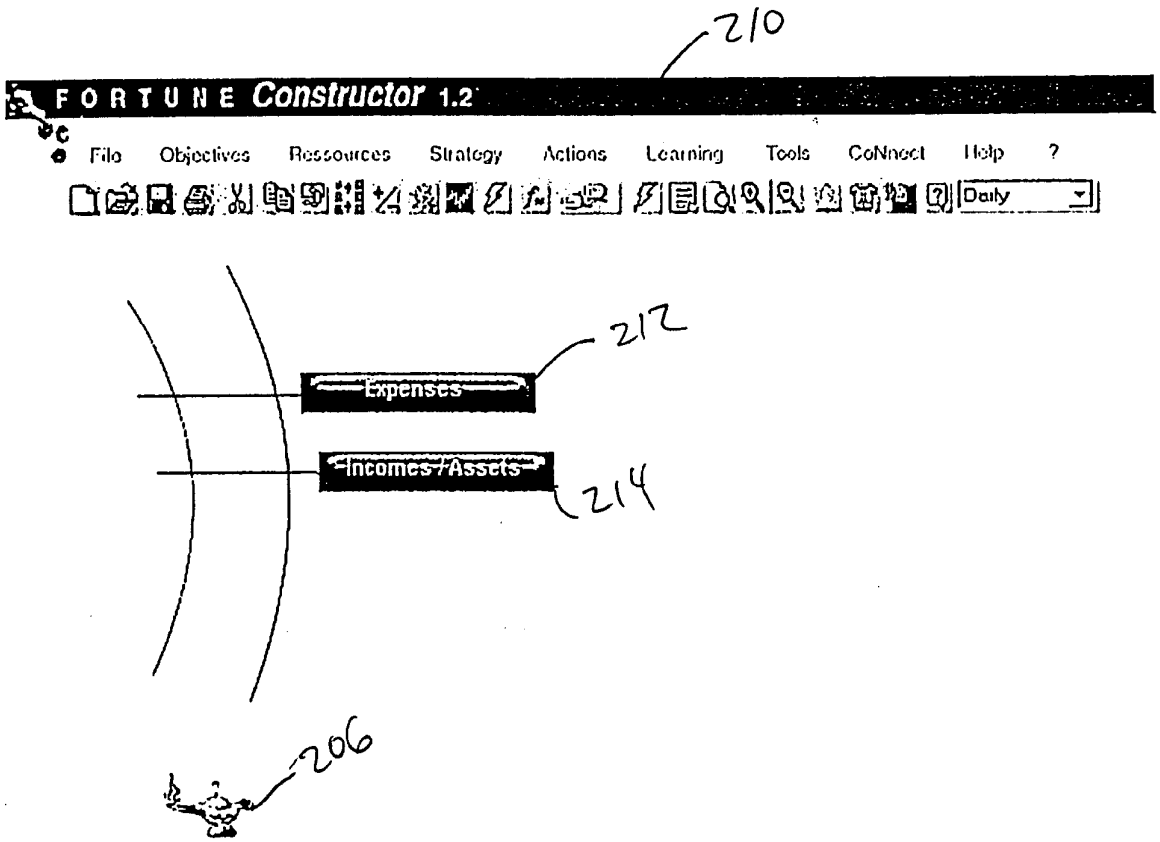
"Entrance"

(1)

Fig 10

After clicking on lamp

(2)



After clicking on calculator

Fig. 11

(3)

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FORTUNE *Constructor* 1.2

File Objectives Ressources Strategy Actions Learning Tools CoNnect Help ?

Daily

Figures

Current Expenses:

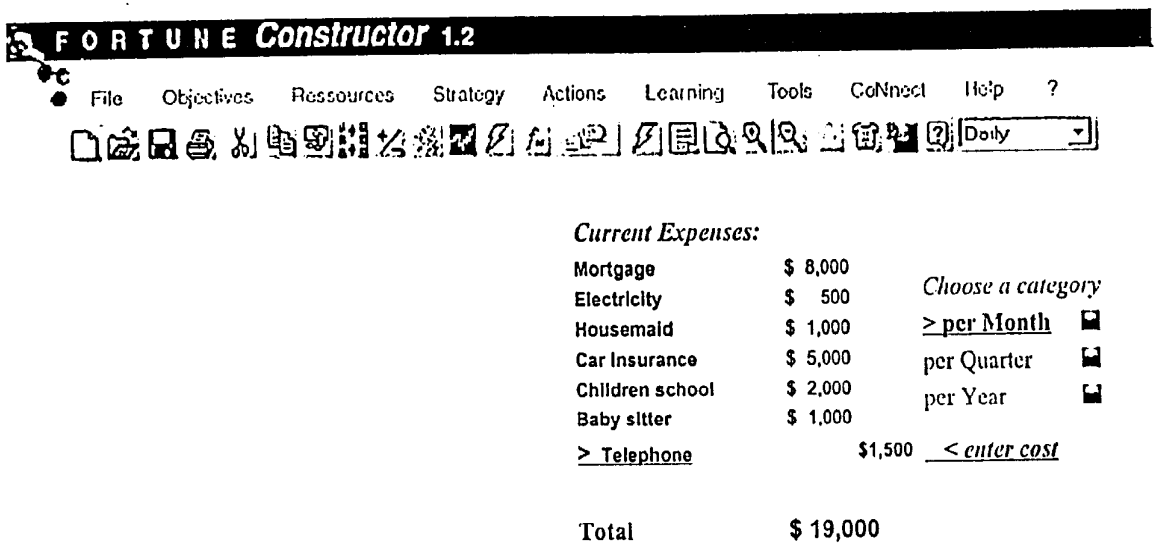
Mortgage	$ 8,000	
Electricity	$ 500	*Choose a category*
Housemaid	$ 1,000	> per Month
Car Insurance	$ 5,000	per Quarter
Children school	$ 2,000	per Year
Baby sitter	$ 1,000	
> Telephone	$1,500	*< enter cost*
Total	$ 19,000	

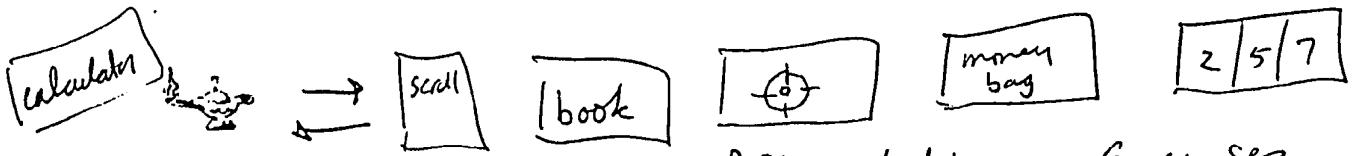
After clicking on Expenses

(no buttons other than lamp)

Fig. 12

(4)





After clicking on Expenses and placing cursor in horizonal line with lamp

Fig. 13

(5)

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FORTUNE Constructor 1.2

File Objectives Ressources Strategy Actions Learning Tools CoNnect Help ?

Daily

Figures

Current Incomes:

Salary	$ 18,000	
Mum's Flat rental	$ 6,000	*UPcoming Incomes*
Current Assets:		> this Year
Cash	$ 9,000	next Year
Stock Portfolio	$122,000	Following Year
Life Insurance	$181,000	
> Miami's Villa	$114,500	*< enter income*
Total	**$ 752,000**	

Fig. 14

(6)

After clicking on Incomes/Assets @ (3)

(no buttons other than lamps)

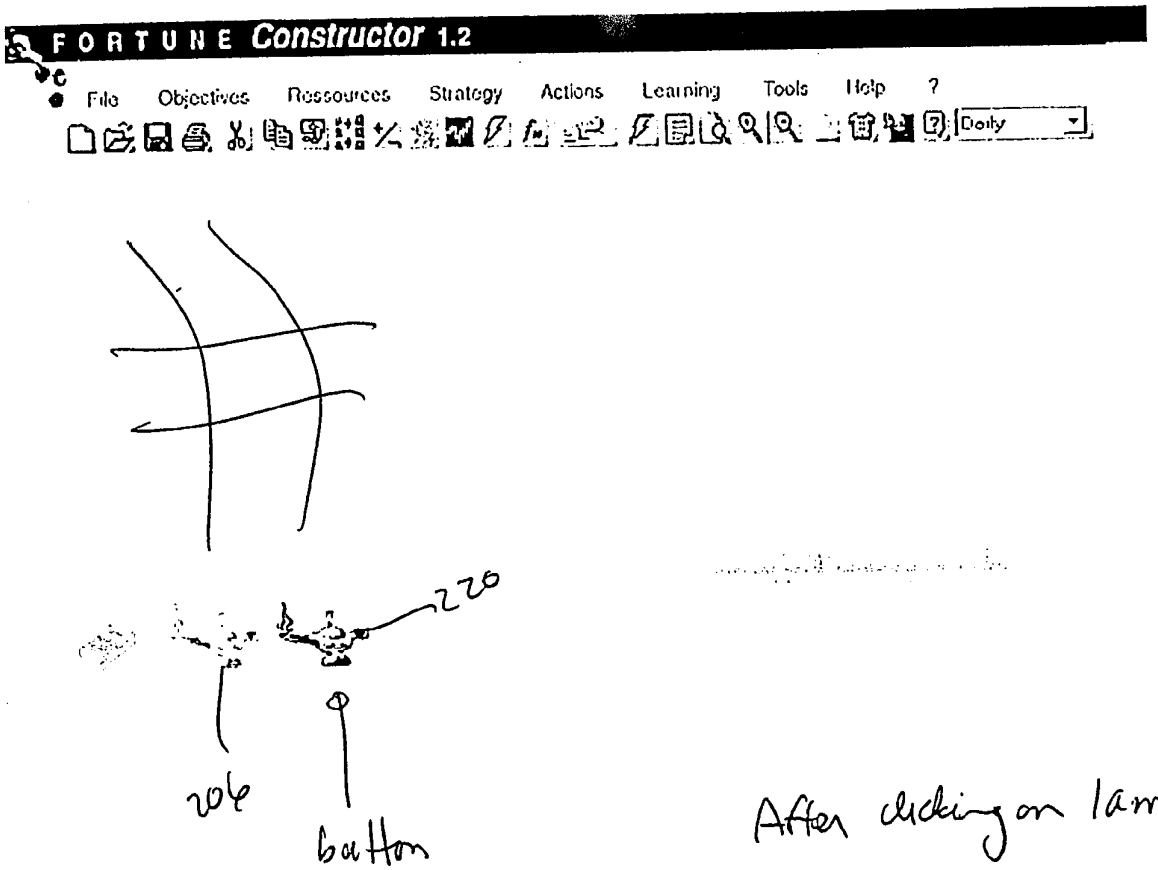

FORTUNE Constructor 1.2
File Objectives Ressources Strategy Actions Learning Tools Help ?
Daily
220
206
button
After clicking on lamp
6
7

Fig. 15

222

FORTUNE Constructor 1.2

File Objectives Ressources Strategy Actions Learning Tools CoNnect Help ?

Daily

Drawing

1 Year Objectives >
Dad's Objectives >

Enter your dream:

Mary's Wedding	$ 10,000
Chango Motorbike	$ 12,000
English seminar	$ 8,000
World Tour	$ 5,000
Try Jetski	$ 20,000
Finance Training	$ 10,000
> Napa Valley Villa	$710,000 < enter cost

Choose a category
Family
Personal
> Material
Rewards
Progress

Total $ 752,000

Fig. 16

Cursor in horiz line of lamps shows as before (none are links to other pages) see 8a

(8)

After clicking on lamp button

cursor pointed at material (shows house)

(pointing at family shows wedding)

(pointing at personal shows motorcycle)

(" " rewards " jet ski)

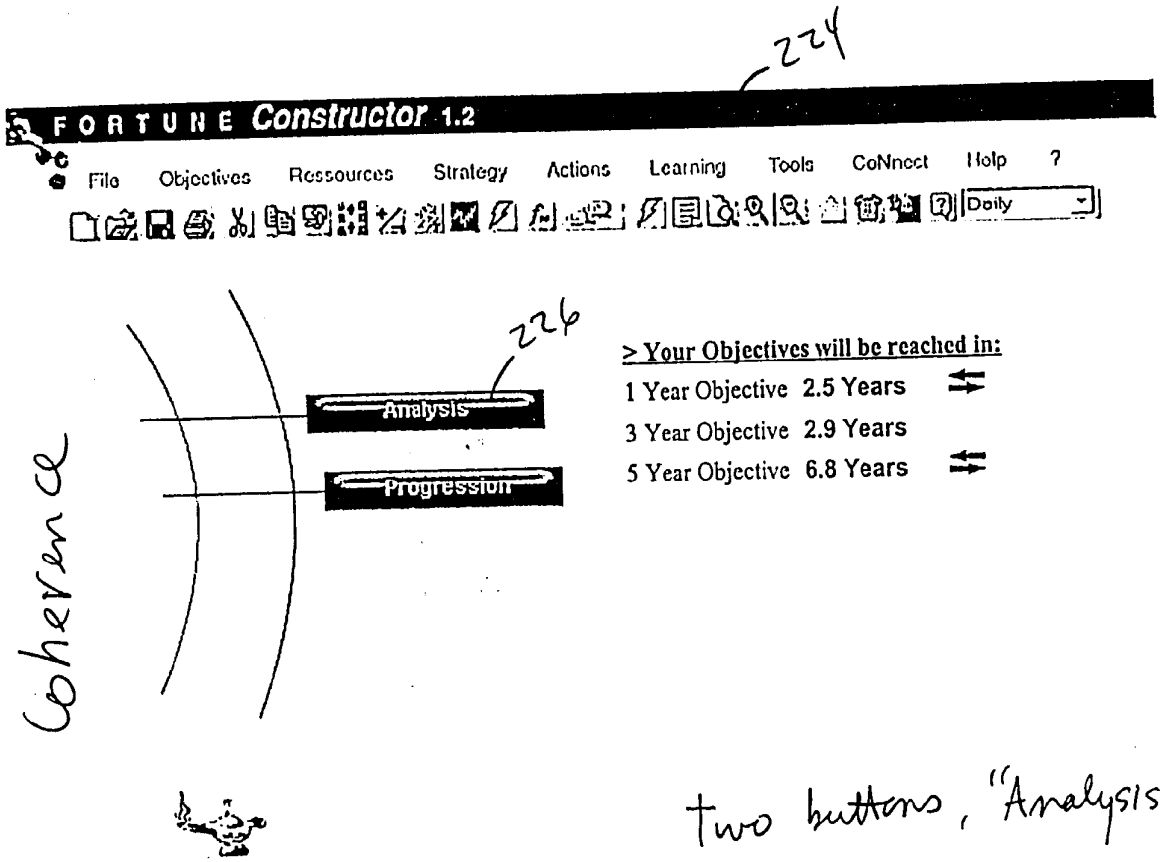


Fig. 17

(10)

two buttons, "Analysis" and "Progression"

Selecting Analysis goes to (11)

Selecting "Progression" goes to (12) ?

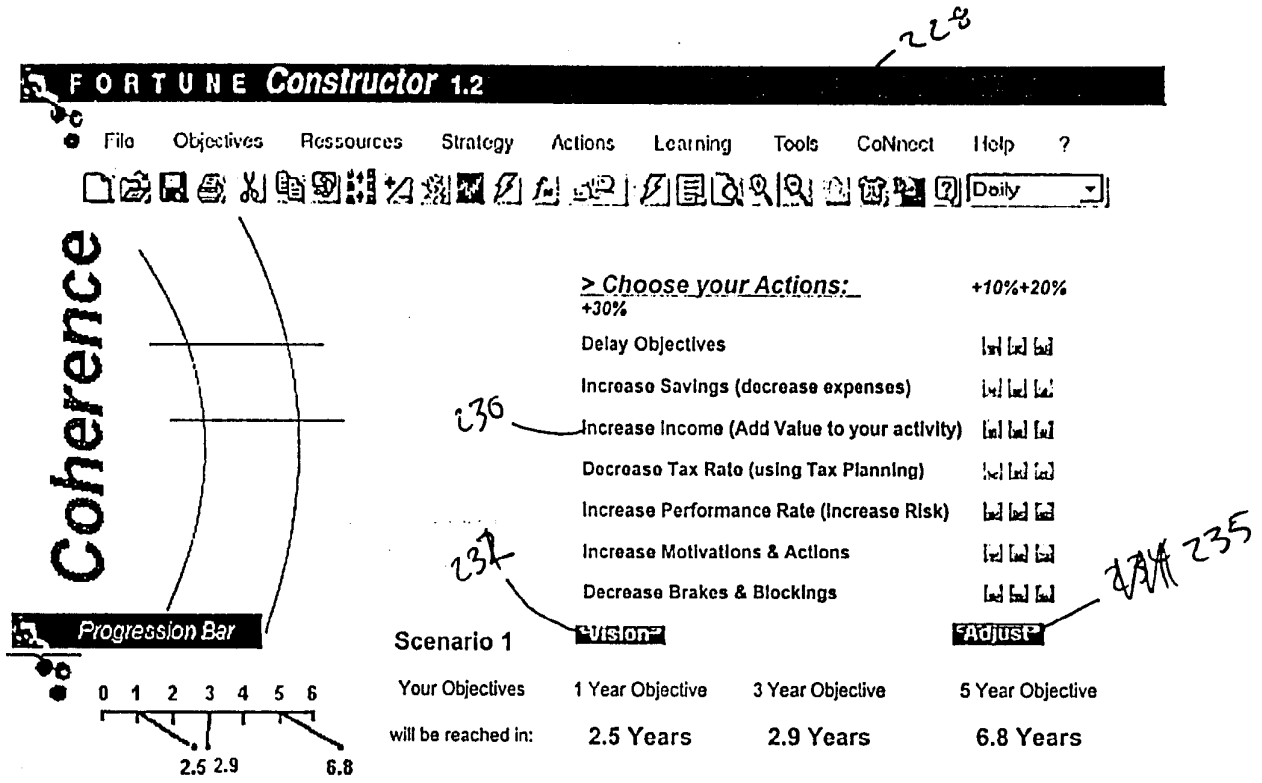
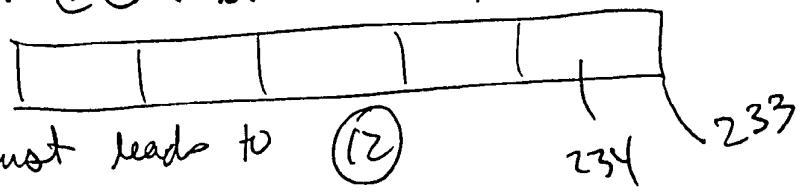


Fig. 18

buttons - setting cursor on "Vision" shows same objective graphics as (8). Some are b/w others are in color (11)



Clicking adjust leads to (12)

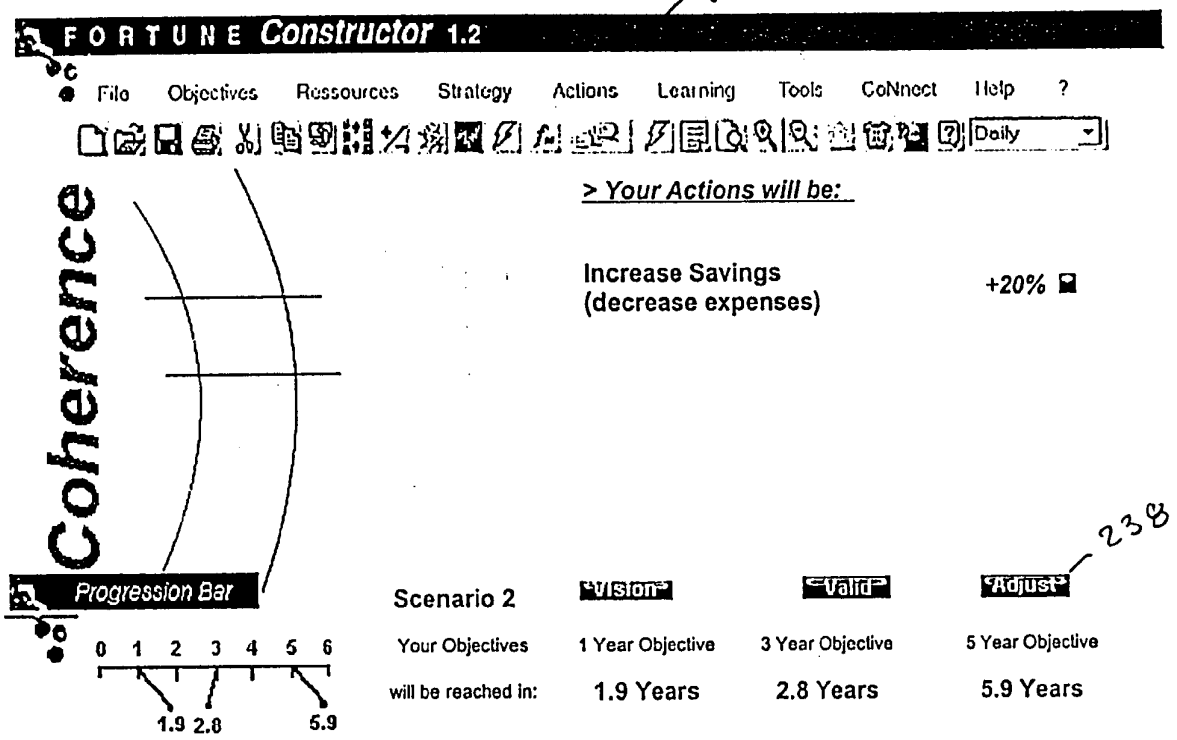


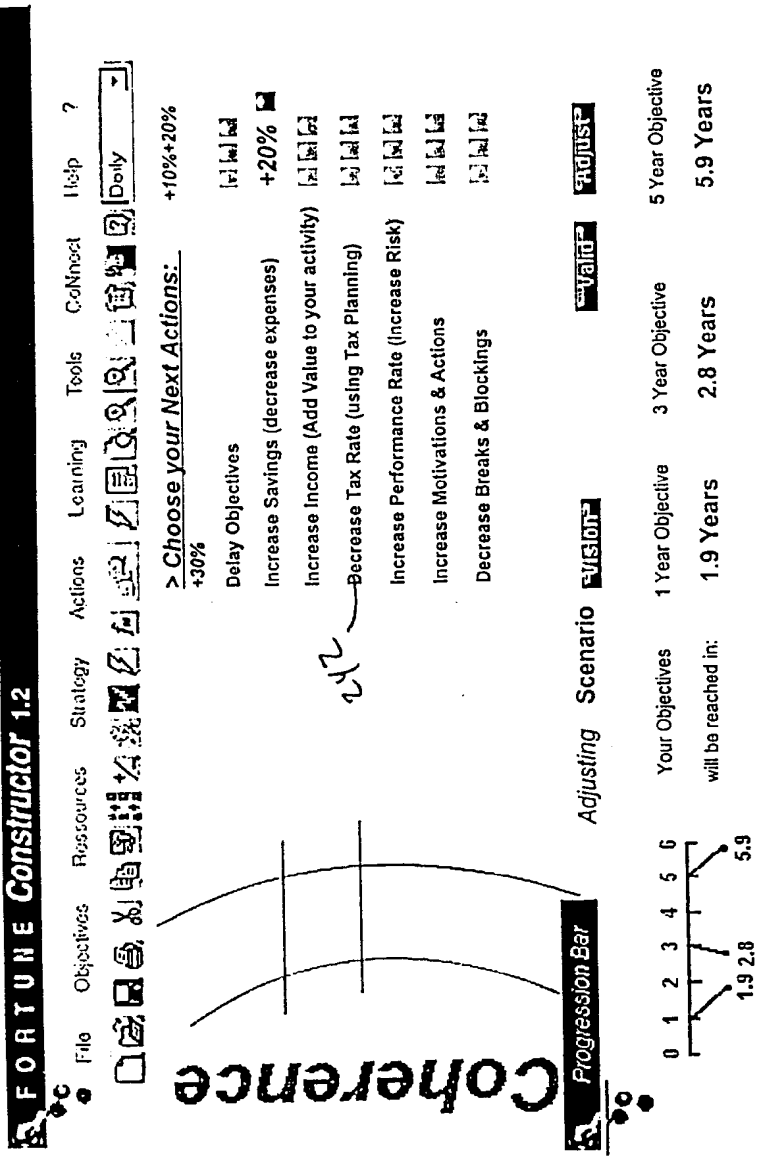
Fig. 19

After clicking adjust (a) (11)

Setting cursor on "Vision" ⇒ same result as (11)

Selecting "adjust" leads to (13)

(12)

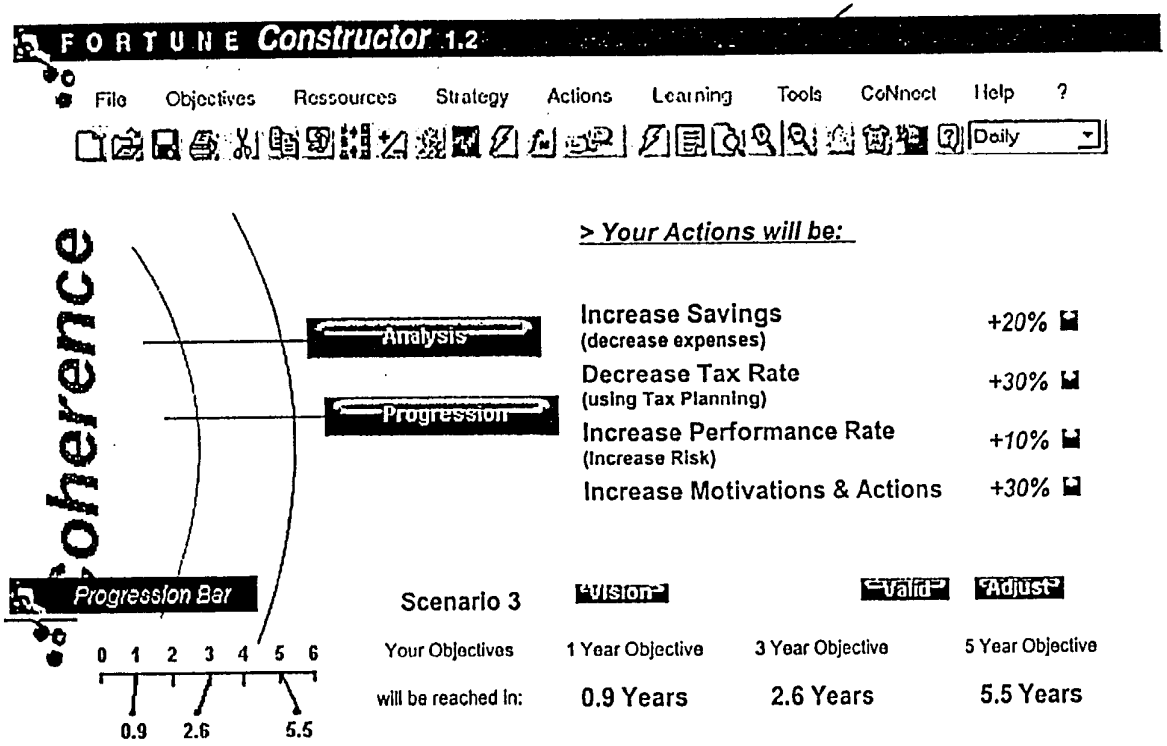


(13)

Selecting "adjust" leads to (14)

Fig. 20

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Selecting "adjust" yields (15)

(14)

Fig. 21

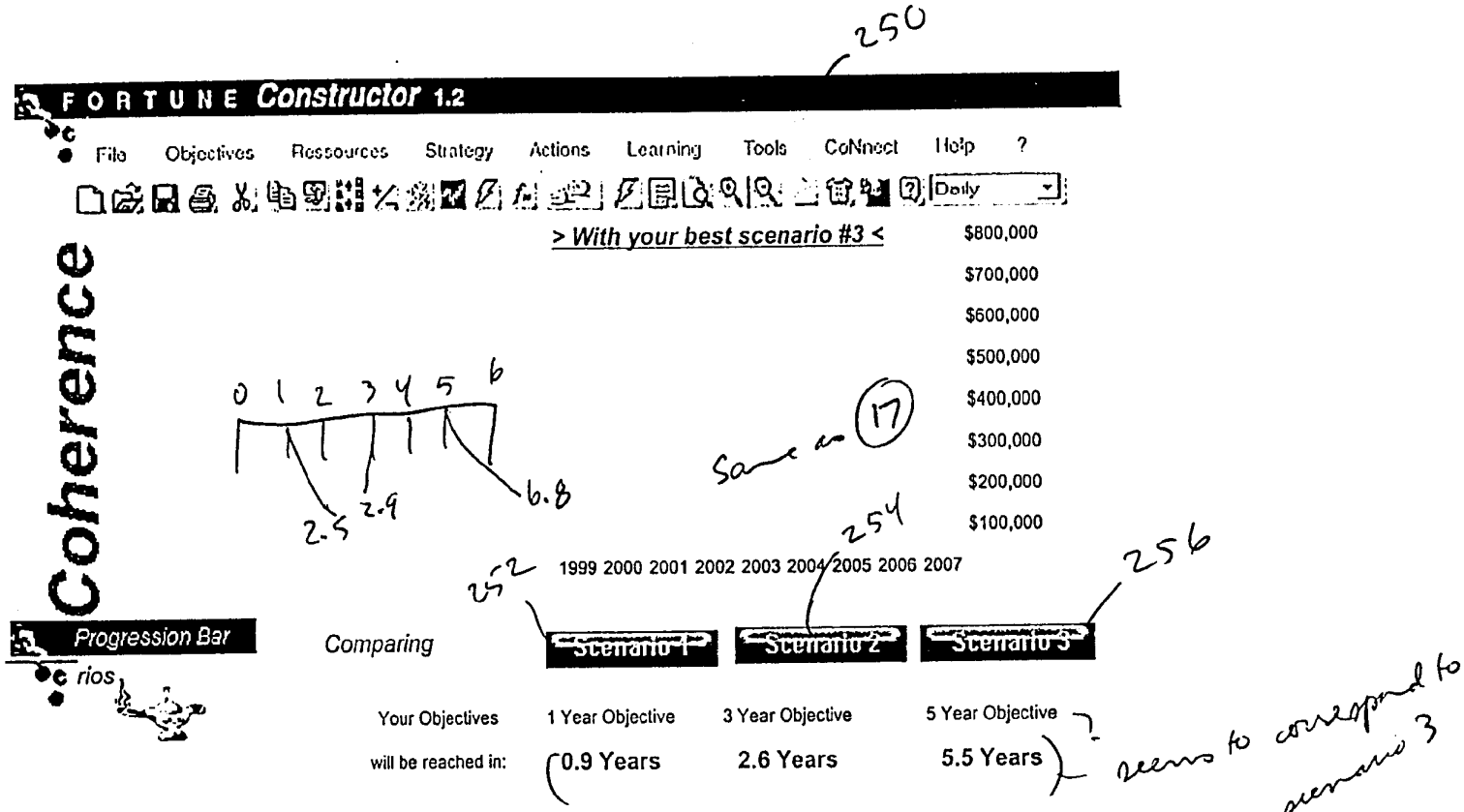
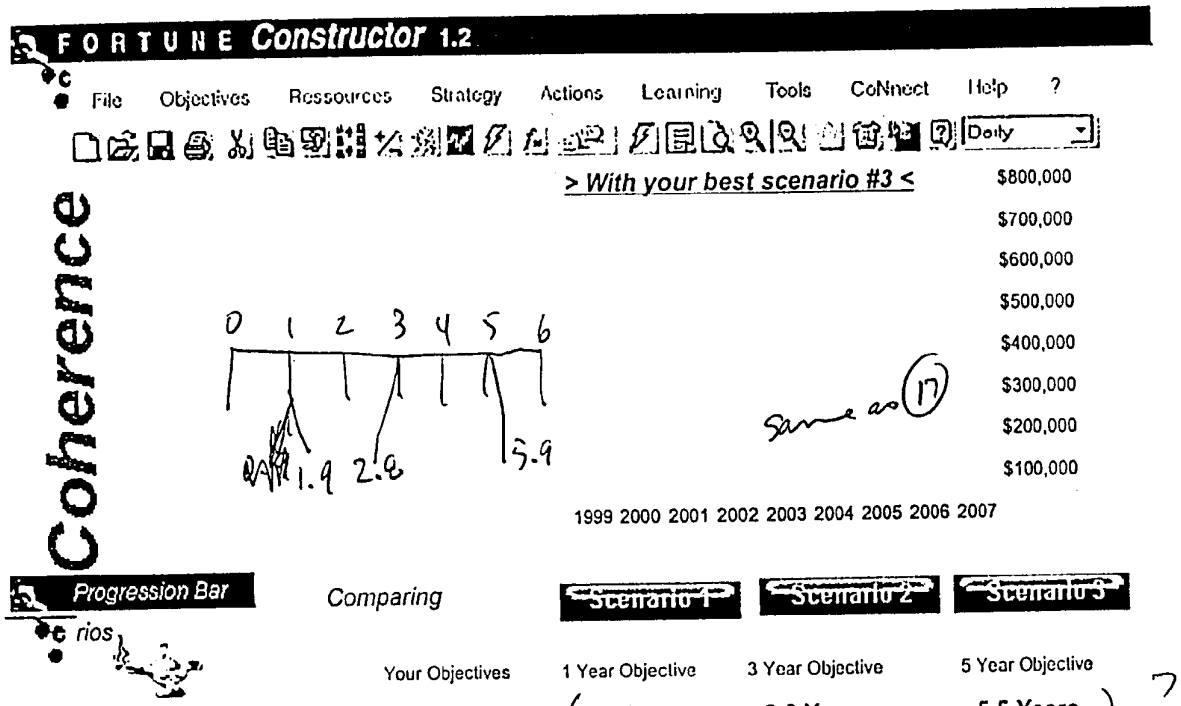

250
FORTUNE Constructor 1.2
File Objectives Ressources Strategy Actions Learning Tools CoNnect Help ?
Daily
> With your best scenario #3 <
$800,000
$700,000
$600,000
$500,000
$400,000
$300,000
$200,000
$100,000
Coherence
0 1 2 3 4 5 6
2.5
2.9
6.8
Same as (17)
1999 2000 2001 2002 2003 2004 2005 2006 2007
252
254
256
Progression Bar
Comparing
Scenario 1
Scenario 2
Scenario 3
rios
Your Objectives
1 Year Objective
3 Year Objective
5 Year Objective
will be reached in:
0.9 Years
2.6 Years
5.5 Years
seems to correspond to scenario 3
(15)
can printed at scenario 1
260
b/w
b/w
b/w
color
258

Fig. 22

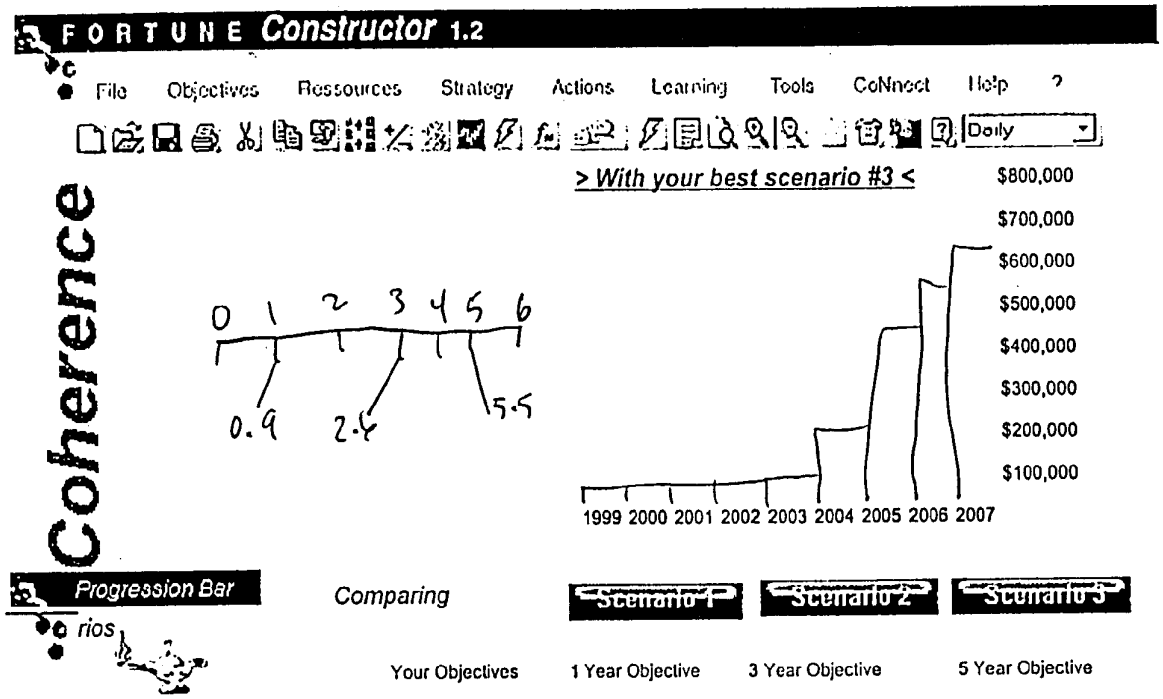


cursor pointed at scenario 2

house / jetski / motorcycle / wedding

b/w — b/w but turning — color — color

Fig. 23



(17)

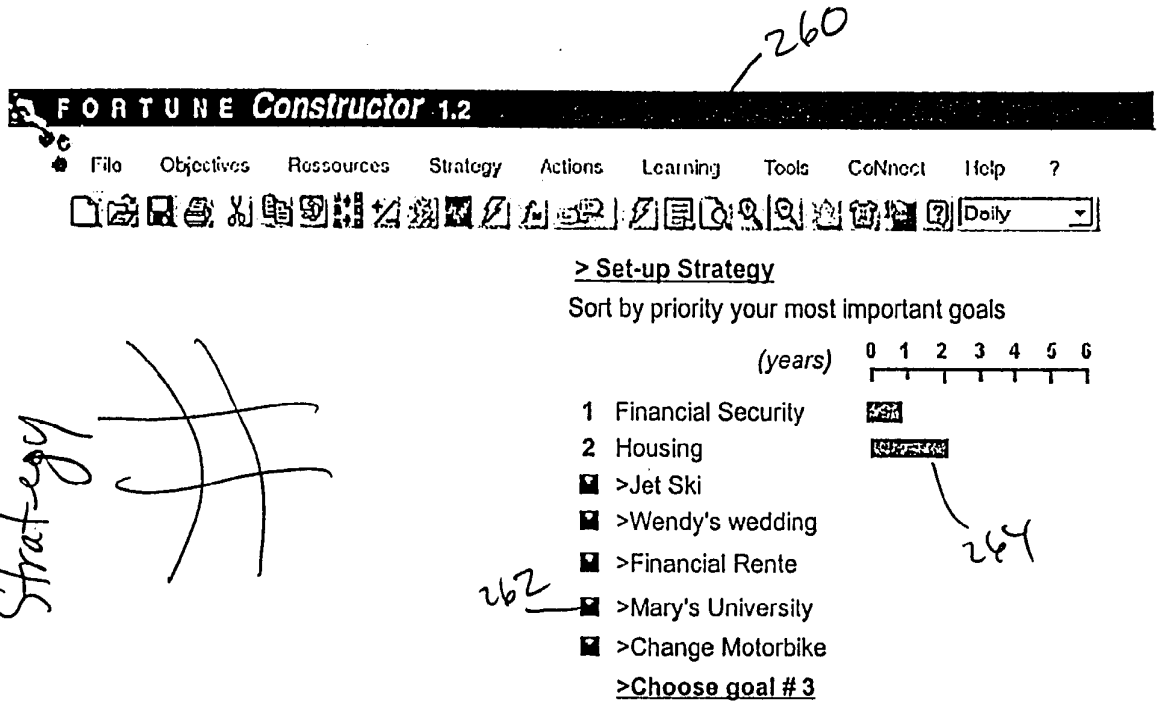
cursor pointed at scenario 3

graphic of house / jetski / motorcycle / wedding

b/w color color color

but turning

Fig. 24

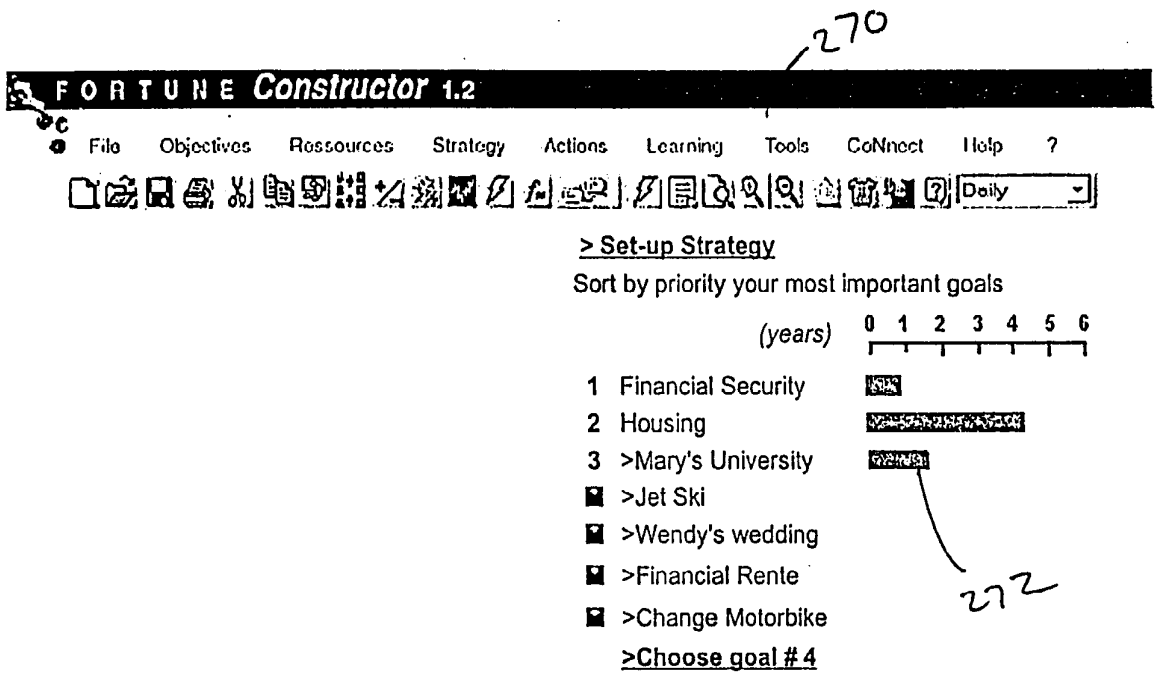


25

choosing Mary's University ⇒ 25a

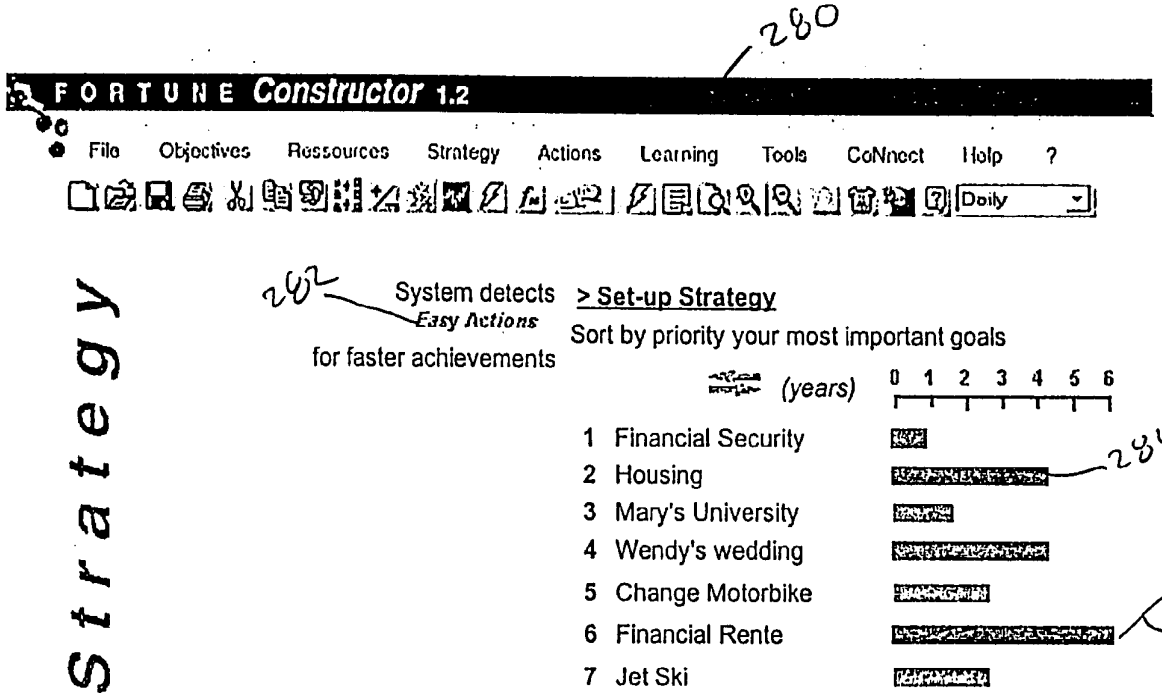
choosing "Financial Rent" ⇒ 25e

Fig 25


270
FORTUNE Constructor 1.2
File Objectives Ressources Strategy Actions Learning Tools CoNnect Help ?
Daily
> Set-up Strategy
Sort by priority your most important goals
(years) 0 1 2 3 4 5 6
1 Financial Security
2 Housing
3 >Mary's University
>Jet Ski
>Wendy's wedding
>Financial Rente
>Change Motorbike
>Choose goal # 4
272

25a

Fig. 26

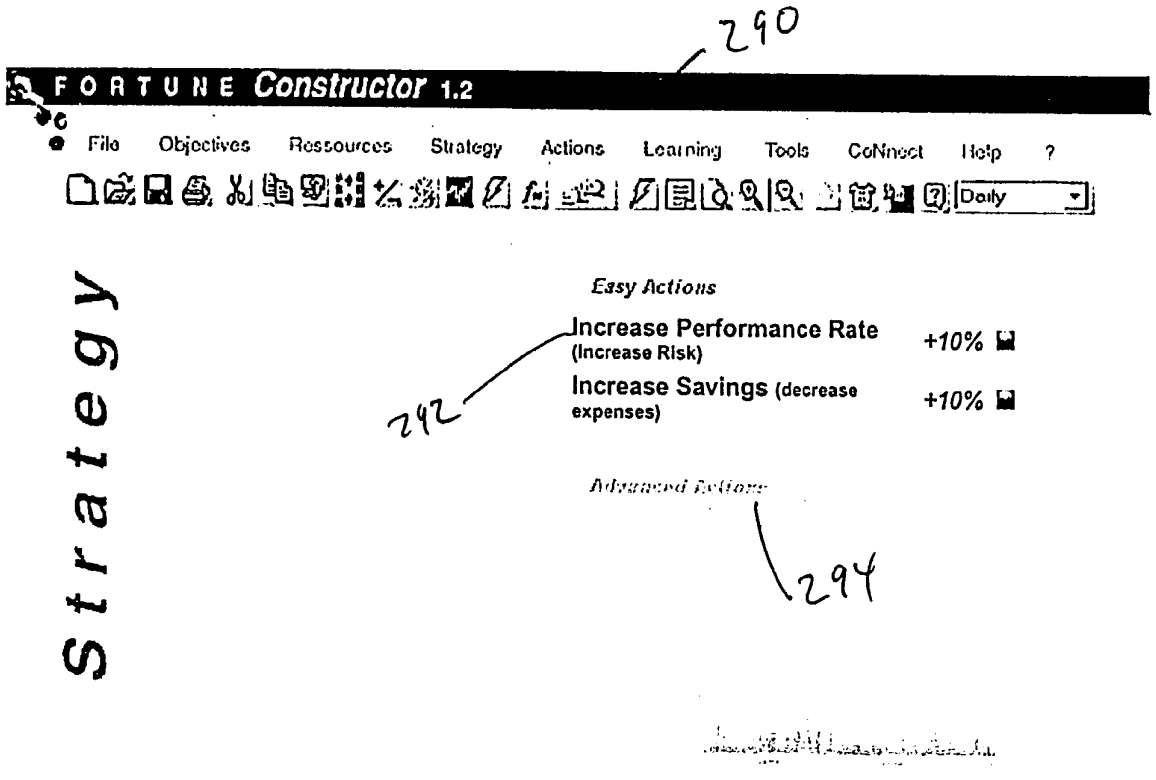


From (25a) choosing Wendy's wedding

Selecting "Easy Actions" shortens time to achieve goals (shown graphically when cursor is on "Easy Actions"

choosing "easy actions" ⇒ (25c)

Fig. 27



Choosing "advanced actions" ⇒ (25d)

(25c)

Fig. 28

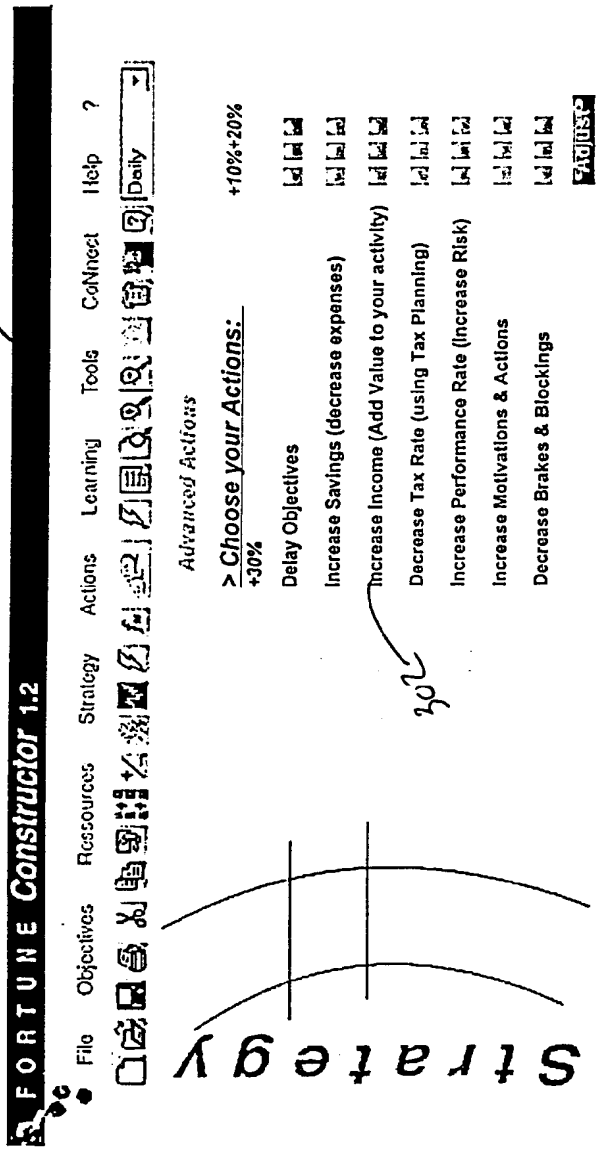
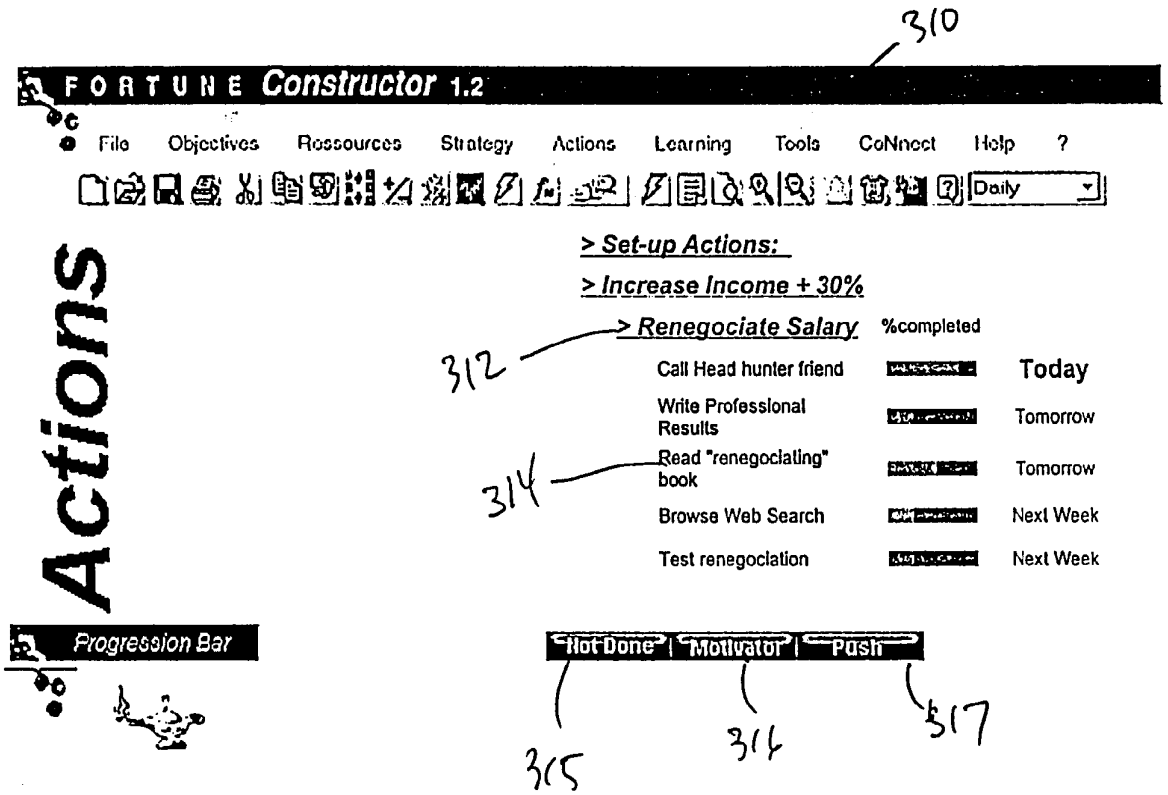

FORTUNE Constructor 1.2
File Objectives Ressources Strategy Actions Learning Tools CoNnect Help ?
Daily
Strategy
Advanced Actions
> Choose your Actions:
+30%
+10%+20%
Delay Objectives
Increase Savings (decrease expenses)
Increase Income (Add Value to your activity)
Decrease Tax Rate (using Tax Planning)
Increase Performance Rate (Increase Risk)
Increase Motivations & Actions
Decrease Brakes & Blockings
350
302

Fig. 29

254



26

Clicking on "Not Done" goes to (27)

Clicking on "Motivator" goes to (28)

Clicking on "Push" goes to (29)

Fig. 30

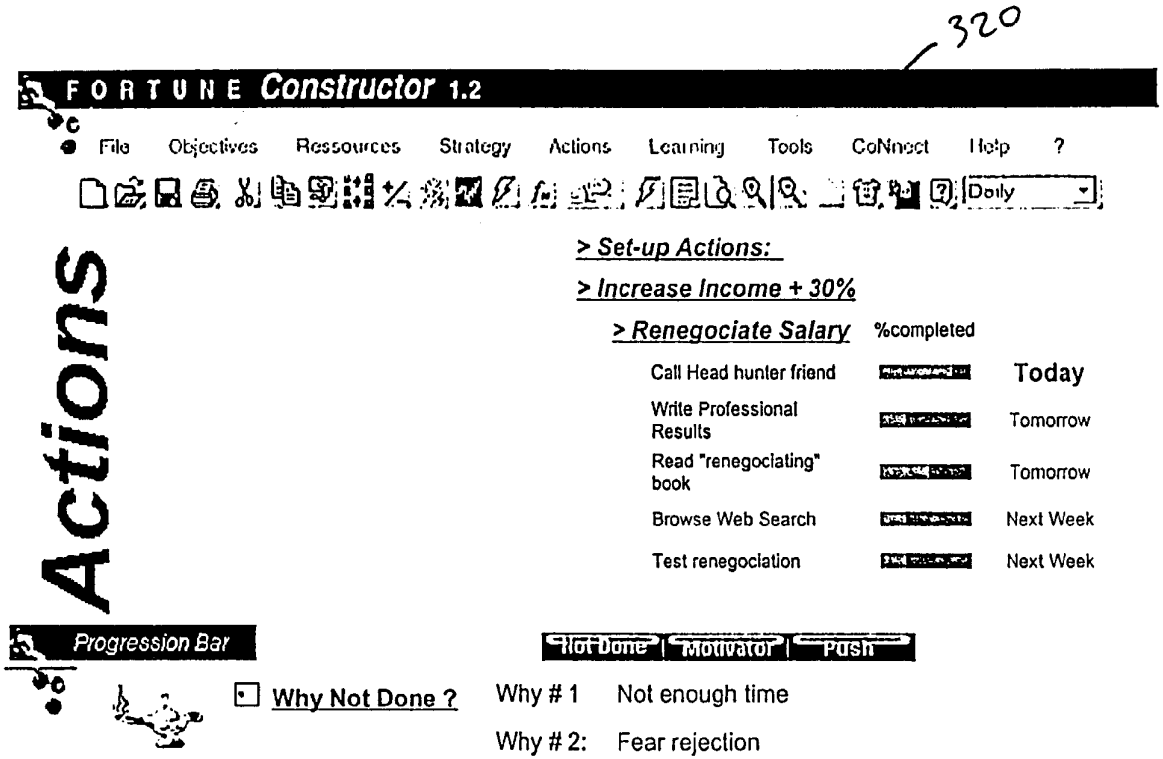
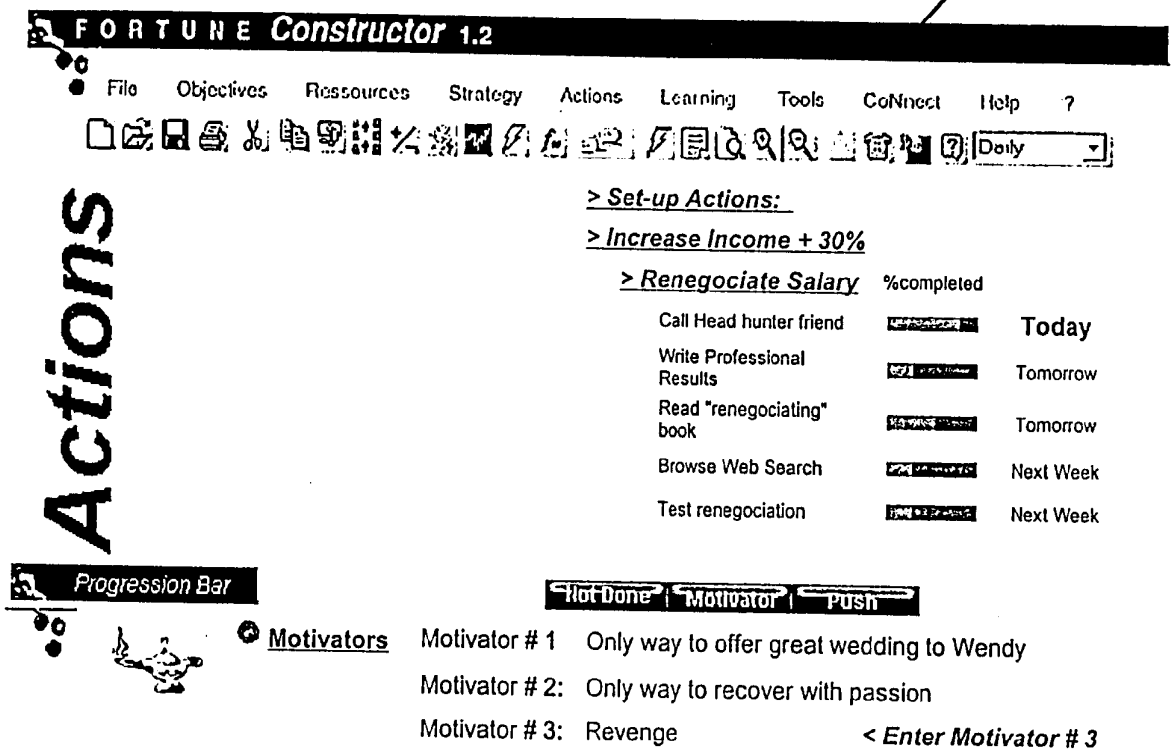

320
FORTUNE Constructor 1.2
File
Objectives
Ressources
Strategy
Actions
Learning
Tools
CoNnect
Help
?
Daily
Actions
> Set-up Actions:
> Increase Income + 30%
> Renegociate Salary
%completed
Call Head hunter friend
Today
Write Professional Results
Tomorrow
Read "renegociating" book
Tomorrow
Browse Web Search
Next Week
Test renegociation
Next Week
Progression Bar
Not Done
Motivator
Push
Why Not Done ?
Why # 1 Not enough time
Why # 2: Fear rejection
Why # 3: Lost phone number
< Enter reason Why 3
27
"Not Done"

Fig. 31

330



"Motivator"

(28)

Fig. 32

340

FORTUNE *Constructor* 1.2

File Objectives Ressources Strategy Actions Learning Tools CoNnect Help ?

Daily

Actions

> *Set-up Actions:*

> *Increase Income + 30%*

> *Renegociate Salary*	%completed	
Call Head hunter friend		Today
Write Professional Results		Tomorrow
Read "renegociating" book		Tomorrow
Browse Web Search		Next Week
Test renegociation		Next Week

Progression Bar

Not Done | Motivator | Push

! Push

Push # 1	Call daughter	
Push # 2:	Remember last ZHunter	
Push # 3:	Goto the gym and call	< *Enter Push # 3*

"Push"

29

Fig. 33

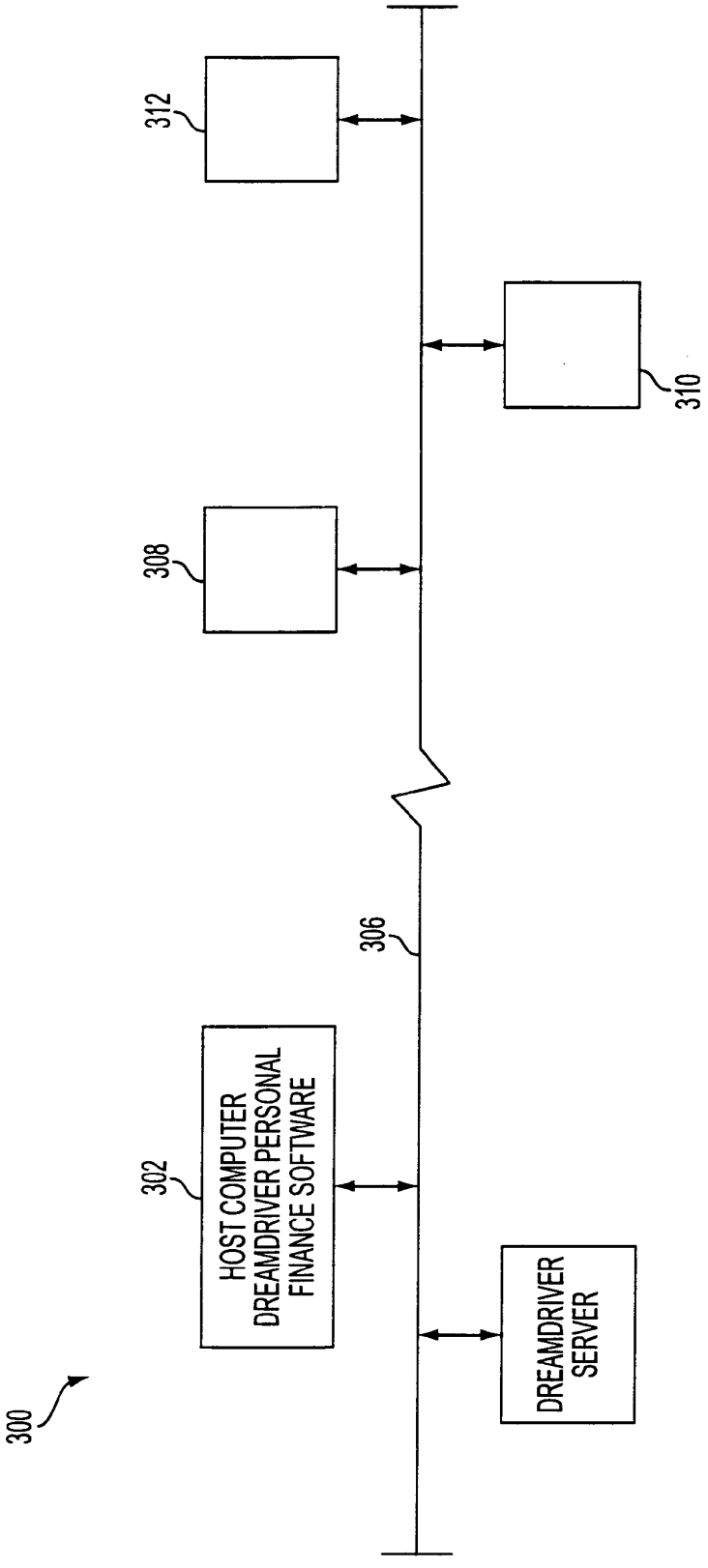

312
310
308
306
302
HOST COMPUTER
DREAMDRIVER PERSONAL
FINANCE SOFTWARE
DREAMDRIVER
SERVER
300

FIG. 34

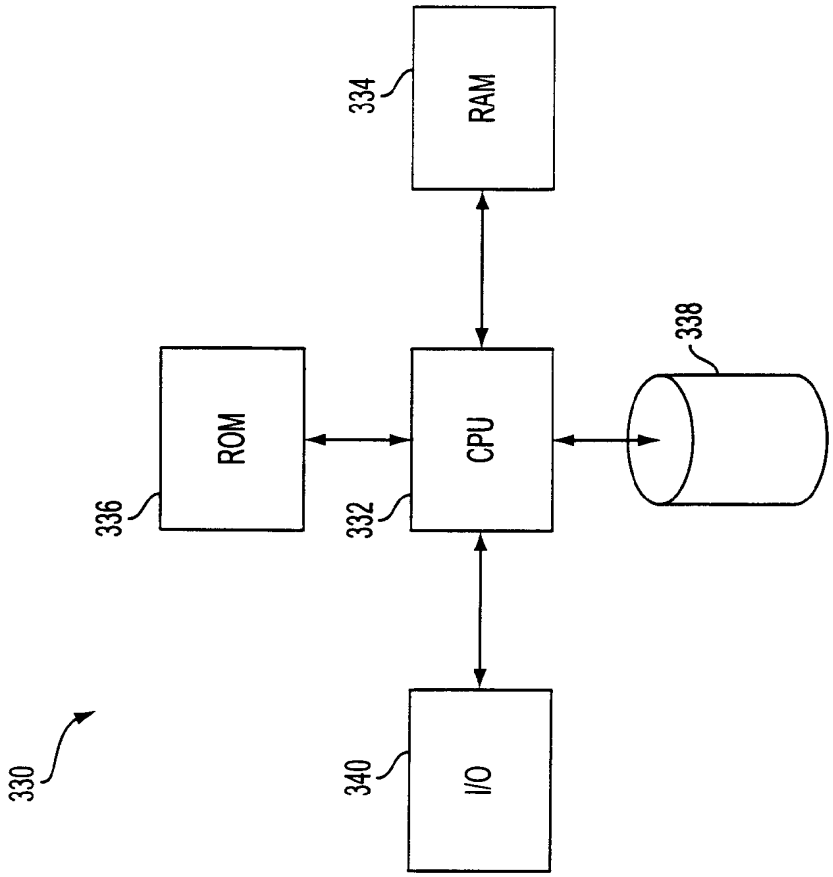


FIG. 35